PAPER TRADE JOURNAL

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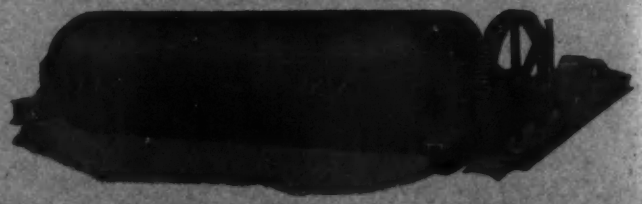

The Biggs Boiler Works Co. Akron Ohio

GLOBE and CYLINDER

ROTARY BLEACHING BOILERS

for Years of Dependable Cooking and Bleaching

PAPER TRADE JOURNAL

ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-THIRD YEAR

Published Every Thursday by the

LOCKWOOD TRADE JOURNAL CO., Inc.

LESLIE R. PALMER, President — GEO. S. MACDONALD, Vice-President & Treas. — F. K. HOPPIE, Secretary

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The Elmendorf Paper Tearing Tester does not tell the approximate tearing strength of paper.

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Adams Bag Company
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Write for Bulletin Seventeen

Thwing Instrument Co.
3341 Lancaster Avenue
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—the true worth in a paper knife is hidden to the eye; the only test is performance

How to Order

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Makers of better cutting knives since 1847
Beloit, Wis.

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ESTABLISHED IN 1872

PAPER TRADE JOURNAL

With Which Is Combined

PAPER

The Magazine of the Paper Industry

Vol. LXXXI, No. 23 Thursday, December 3, 1925

Big Power Show Surpasses Former Exposition

Impressive Presentation at the Grand Central Palace of Absorbing Interest to Paper Industry —Exhibitors Show Vast Range of Devices Developed for More Efficient Use of Power as Applied to Machinery—Advances Made Possible by Chemical Research Plainly Demonstrated—Everything Shown Intended to Conserve Power and Heat

By far the largest and most comprehensive Exposition of Power and Mechanical Engineering ever held, opened on Monday afternoon in the Grand Central Palace, New York, and will continue until Saturday evening. The presentation is impressive from every point of view. More than 400 exhibitors show a vast range of devices developed for the more efficient use of power in its application to machinery and in a great number of the displays can be seen the advances made possible by chemical research on behalf of industry.

Some of the exhibits are immense in their size and weight, including installations of complete meters, heating plants, ventilating systems and complicated forms of power transmission. From these ponderous objects the presentation ranges down in size to the thousands of precision devices—gauges, meters and other indicators in endless variety, representing the last word in mechanical accuracy. Every exhibit plays its part in industrial life.

The exposition could logically be termed a power economy display, since everything shown in it is intended to conserve power and heat. Refractory brick and other materials are shown in dozens of the spaces, constituting one of the largest groups in the exposition. The displays devoted to power transmission are also very numerous, especially of gears, roller and ball bearings. One ingenious device that illustrates the velvet smoothness of roller bearings in transmitting power operates at terrific speed, though its motive power is merely the draft of air from an ordinary electric fan.

Lack of space prevents individual mention of all the exhibits but the following is a record of some of those which are of particular interest to visitors from the paper industry.

Nash Engineering Co.

The exhibit of the Nash Engineering Company, of South Norwalk, Conn., on the ground floor of the Exposition, is arousing great attention and interest. The Jennings Hytor Vacuum Heating Pump is prominently featured. This is a manifold type for return line heating systems and other vacuum work where liquid is handled with a gas.

Another valuable product shown is the Jennings Hytor Condensation Pump, unit type, electric motor driven, designed to handle condensate from steam heating or drying systems. Nash Hytor Compressors for air and gas, which are noted for durability and reliability, are also displayed.

Members of the paper trade are specially interested in the Jennings Hytor Flat Box Pumps, designed specially for paper mill service. The Nash Engineering Company for many years have specialized in the manufacture of vacuum pumps for the pulp and paper industry. The service for which these pumps have been applied, includes creating a vacuum on the flat boxes on the wires and felts of Fourdrinier and sulphite drying machines and on the felts of cylinder machines, as well as creating a vacuum on the suction couch and press rolls. It is an interesting fact that paper mills in the United States whose production totals 81 per cent of the total paper manufactured in the States have installed from one to 130 pumps of Nash manufacture in their mills.

In attendance at the booth are George B. Wright, advertising manager; R. H. Carpenter, manager of the New York office; W. Thompson, Russell Donnelly, T. J. Smith and J. A. Fortin.

Westinghouse Electric & Mfg. Co.

Innumerable visitors to the exposition are being irresistibly attracted to the splendid exhibit of the Westinghouse Electric and Manufacturing Company, of East Pittsburgh, Pa. Westinghouse Mechanical Drive Turbines are attractively displayed here and their important features ably demonstrated.

Direct-Connected Turbine-Generator Units are also arousing great interest. These units have been developed to meet the demand for high grade, direct-current, non-condensing steam turbine-generator lighting sets for small industrial plants, steam shovels, isolated pumping plants, excitation, general outdoor construction work, etc. They have been very extensively installed on steam locomotive cranes to supply current for energizing lifting magnets.

Two 2 Stage Air Ejectors with Surface type intermediate and after condenser are also featured. A varied display of Westinghouse indicating instruments for direct and alternating currents is also worthy of special mention.

Members of the staff in attendance at the booth during the week are: R. W. Cargo, P. H. Grunnagle and R. A. Neal, of East Pittsburgh; G. E. Keating and H. Van Blarcum, of South Philadelphia; Ray Pierce of Newark and R. J. Henritze, N. T. Martin, J. K Baroff, G. Studley and H. V. Schoeplen, of New York.

Combustion Engineering Corp.

One of the most elaborate exhibits at the Power Show is that of the Combustion Engineering Corporation, of New York, on the main floor of the building. The C-E Unit System for burning pulverized fuel combines a pulverizing mill of the impact type with modern, pulverized fuel, furnace design, and is fully demonstrated at this interesting booth.

Another feature of this exhibit is the C-E Air Heater, a means of returning to the furnace a large proportion of the heat ordinarily lost in the flue gases. The C-E Fin Furnace, a water-cooled furnace which eliminates wall maintenance and increases boiler capacity, is also shown.

The Lopulco Pulverized Fuel System, as designed for stationery boilers is illustrated by an animated "Seen in Action" panorama

which is creating great interest. The Raymond Mill, which operates on the air separation principle is prominently featured at this exhibit.

Green Forced Draft Stokers for burning Bituminous or lignite coals are also shown and demonstrated. On the third floor the Ruths Steam Accumulator is thoroughly explained and illustrated.

C. McDonough is in charge of this comprehensive exhibit, assisted by members of the New York sales staff. Out of town district managers will also be in attendance at the booth during the week.

Worthington Pump & Machinery Corp.

The Worthington Pump and Machinery Corporation, of New York, are exhibiting the cylinder, piston and piston rod, and spray valve of their new double-acting two-cycle Diesel Oil engine. This engine, built for the Shipping Board, has been in operation on a thirty-day non-stop run under Government supervision and several ten day and longer period runs, totalling 1,300 hours, or 7,375,000 revolutions under full load, without any replacement or repairs. The cylinder, piston and piston rod show practically no wear, as a result of the splendid design of this engine. Other machinery exhibited includes:

A 4" Worthington type OS horizontal split-case volute centrifugal pump mounted on bedplate with 7½ motor direct connected with flexible coupling between pump and motor. This is Worthington standard design of medium pressure centrifugal pump, and the particular size exhibited is rated at a capacity of 200 to 600 GPM on heads from 12 to 110'.

An 11 x 12 single horizontal belt driven air compressor with idler. This is a standard Worthington Feather valve compressor of normal rated capacity with 350 cubic feet displacement per minute.

A 3½ x 4 Laidlaw vertical Feather valve compressor. This is the standard vertical machine for operation at any speed up to 550 RPM, and suitable for air pressure up to maximum of 250 lbs. square inch. It is also adaptable for vacuum service.

A 4 x 6 Deane pattern vertical triplex single acting power pump illustrates Worthington design and assembly for their line of triplex power pumps generally. It is of the so-called built up type with separate frames, cross head guides, plunger barrels, valve chests, adjustable crosshead shoes and adjustable connecting rod boxes, and can of course be fitted with single or doulbe reduction gears of spur, single helical or Herringbone type. The normal rating of the pump exhibited is approximately 50 GPM.

A 6 x 4 x 6 Worthington standard duplex piston pattern boiler feed pump. This pump is specially typical of Worthington standard boiler feeder so well known everywhere. This particular size is rated for approximately 460 boiler horsepower. It is good for 200 lbs. working pressure.

Worthington representatives in attendance at the Power Show are: C. W. Rice, in charge, H. L. Conklin, E. W. Hammond, K. F. Bernard, J. H. Messerly, C. K. Hood, R. H. Lloyd and F. W. Hankins.

Timken Roller Bearing Co.

Timken Roller Bearings are effectively displayed in a wide variety of sizes and types at the stall of the Timken Roller Bearing Company, of Canton, Ohio. The Timken Bearing, with its rolls which are tapered and self-aligning—made from Nickel Molybdenum Timken Steel—may be relied upon safely to protect machine investment, to assure machine efficiency. Suitability for all kinds of service lies in Timken Design. Durability in all service lies in Timken Steel.

There are multifarious machines. But they all contain rotating parts—shafts, or gears, or wheels, or pulleys. And the longevity of these parts spells the longevity of the machine.

Timken Bearings become potent, economic elements in the operation of any machine since, by protecting its life, they maintain its efficiency—rendering it a thrifty producer of service or material.

S. C. Merrill, New York District Manager; L. M. Klinedinst, General Manager, Maryland Division; H. H. Gildner, Philadelphia District Manager; and F. A. Allen, Boston District Manager, are in charge of the exhibit.

Frederick Iron & Steel Co.

A great variety of centrifugal pumps are displayed at the interesting and elaborate booth of the Frederick Iron and Steel Company, of Frederick, Md. The power used in paper mills for pumping the stock from one point to another is a considerable portion of the total power required to operate the plant. For many years paper mills have used the ordinary fan type centrifugal pumps with large clearances and unfinished fan wheels. These moved the stock, but required much power to do the work. In comparatively recent years more efficient centrifugal pumps have been produced and these have made almost incredible reductions in power required. The result has been a great saving in cost for mill operation where the entire plant has been equipped with such pumps.

To successfully handle the heavier consistencies of stock, the single suction pump with direct side inlet to the impeller is the best design, because it permits most direct water passages and simple construction. The impeller in a single suction pump can be made with more liberal passages for the same capacity than in a double suction pump, thus enabling the pump to handle heavier consistencies of stock. In some single suction pumps end thrust of the pump rotor has been a source of trouble.

In Frederick pumps this objection has been absolutely and completely eliminated by the proportions of the balancing chamber and the usual balancing holes. No Frederick pulp pump has ever burned out a bearing due to end thrust and no complaint has ever been made by an operator that bearings run at excessive temperatures. This is accomplished without the use of water cooling. Frederick standard stock pumps successfully pump pulp up to 4 per cent consistency with high efficiency.

Russell MacKane, sales manager, is in charge of the booth.

The Bristol Co.

Instruments for recording, indicating and controlling are featured at the attractive booth of the Bristol Company, of Waterbury, Conn., including: Pressure and Vacuum Gauges, Liquid Level Gauges, Thermometers, Pyrometers, Voltmeters, Milli-Voltmeters, Ammeters, Shunt Ammeters, Wattmeters, Frequency Meters, Mechanical and Electrical Time Recorders, Pneumatic and Electric Tachometers and Psychometers; also Temperature Controllers, Radio Averaging Instruments, etc.

Many exclusive features are incorporated in Bristol's Instruments which make them specially desirable and are not duplicated in any others. The simplicity of principle and construction is one of the most noticeable characteristics of all Bristol's Instruments.

Perhaps the one greatest reason for the success of Bristol's Recording Instruments is their practicability in every day industrial use. They furnish a fine example of where science is an aid to productive industry. Bristol's have not only proven to be theoretically correct, but both workable and dependable in actual practice. There is no exception to this in any Bristol Instrument.

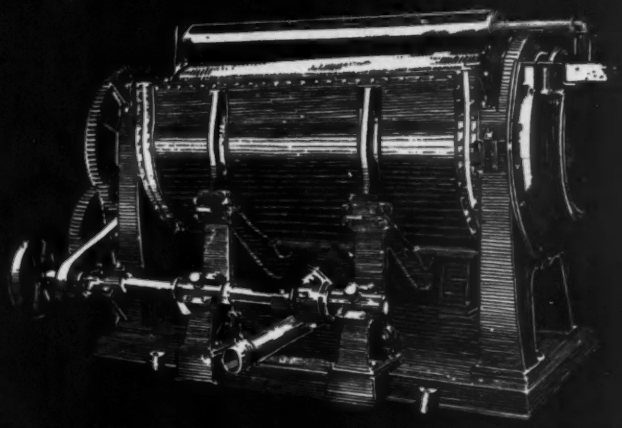
The Bristol exhibit is in charge of B. G. Hamlett, of the San Francisco office, who is ably assisted by C. W. Williamson, J. H. Ferguson, T. J. Atkins, H. C. Clark and R. S. Blodgett.

Tide Water Oil Sales Corp.

Lubricating oils and greases are featured at the exhibit of the Tide Water Oil Sales Corporation, of New York. The application of the Tide Water Power Group affords the film of protection for paper mill machinery, thin as tissue, smooth as silk and tough as steel. Maximum power uninterrupted operation and increased production is assured by the use of these excellent lubricants.

P. F. Cassidy, Chief Engineer, A. R. Nelson, Sales Supervisor and other members of the staff are assidious in instructing and entertaining visitors to the show.

Increased Output
Uniform Quality
Reduced Power
Lower Labor Cost



17,000 Tons of Paper pass through Bird Screens Daily

With such definite and important advantages it is not to be wondered at that by far the largest portion of this country's huge volume of paper production is screened through Bird Screens.

BIRD MACHINE COMPANY
South Walpole, Massachusetts

BIRD MACHINERY

BIRD SCREENS

General Electric Co.

As usual at expositions of this magnitude, the General Electric Company, of Schenectady, N. Y., is to the fore with a splendid exhibit of its products. Type D 53 Steam Turbine for driving generators, pumps, etc., is greatly admired by the many visitors to the booth.

Fabroil gears, which have established an enviable reputation for success in a wide variety of applications in mechanical transmission of power, where, because of noise, or other reasons, the intermeshing of metal gears is impracticable or undesirable, are attractively displayed.

G-E Electrically operated flow meters for measuring steam, water, air, oil, gas, etc., are also demonstrated. The electrical instruments used with these meters are of the same high design and workmanship as those that have been manufactured by the General Electric Company for years.

The G-E Surface Air Cooler is also featured. The principle of the closed system of ventilation is the re-circulation of the ventilating air of the turbine-generator back to the machine after it has been cooled by passing over the finned surface of a cooler using water as its cooling medium.

A. C. Kidder, of Schenectady, and other prominent members of the staff, are ably demonstrating the many G-E products to interested visitors.

Jenkins Bros.

The Jenkins Rapid Action Valve is prominently featured at the exhibit of Jenkins Brothers, of 80 White street, New York. It can be opened or closed instantly and stays open without the aid of set screws, locking device, or other appliances. This valve closes without the annoyance and strain of water-hammer, the pounding and rumbling in the pipe usually apparent when a flow of water under pressure is suddenly shut off.

The hand lever when given a quarter pull bears on the end of the spindle, which pushes disc off the seat and opens the valve. The lever aligning with the spindle positively holds the valve open. A slight pull on the lever will throw it out of alignment with the spindle, and the disc is then immediately forced on seat.

The closing of the disc on seat is regulated to avoid water-hammer. This is done through a combination of spring, piston, and water pressure. The carefully worked out design of this valve, and its exacting construction throughout, make it absolutely dependable. Standardized manufacture makes parts interchangeable.

Moncrieff's Scottish Guage Glasses, for which Jenkins Brothers are sole U. S. agents, are also displayed at this booth, which is in the capable charge of F. G. Jolley and C. L. Stallings.

Warren Steam Pump Co.

Warren Steam Pumps, centrifugal and reciprocating, are featured attractively at the exhibit of the Warren Steam Pump Company, of Warren, Mass. Warren Pumps are the result of engineering ability, manufacturing skill and experience applied exclusively to the production of dependable and efficient pumping equipment. The pumps are built in a modern, well-equipped, well-manned shop by an organization that has specialized in the design and construction of fine pumps for twenty-seven years.

It is the policy of the Warren Steam Pump Company to build only pumps that will effect lowest possible cost of operation and maintenance. To carry out this policy, rigid standards of quality have been developed.

In attendance at the booth are J. G. Rearick, H. C. Fetter, P. A. Collins, and W. M. Shuttleworth.

The Foxboro Co., Inc.

Many different types of indicating, recording and controlling instruments are displayed at the exhibit of the Foxboro Company, Inc., of Foxboro, Mass. These instruments are not assembled articles, but are built entirely in their own factory by men who are trained craftsmen in the art of instrument making. The continued success of Foxboro instruments in all industries has earned for them the title of "The Compass of Industry."

C. C. Fuller is in charge of the booth and S. McDonald, of Montreal, Carl Sullivan, W. W. Patrick, L. L. Tremaine, and other members of the staff are also in attendance. H. B. Bristol, president of the company, is also spending considerable time at the show.

Republic Flow Meters Co.

Republic Electrical Level and Pressure Recorders for Reservoirs are shown at the booth of the Republic Flow Meter Company, of Chicago, and the principles of operation ably demonstrated. A varied assortment of high grade steam meters, recorders, pyrometers, water meters, coal meters, gas meters, and draft instruments, manufactured by this enterprising organization, are also displayed.

George S. Hendrickson is in charge of the booth, and J. D. Cunningham, president of the company, will also be in attendance as often as possible during the week.

S. K. F. Industries, Inc.

Ball Bearing Hangers and Transmission Appliances are very attractively displayed at the booth of the S. K. F. Industries, Inc., of New York. Line-shaft equipment is the connecting link between the prime mover and the producing machine. It is, therefore, one of the most important parts of the mechanical equipment of any power-driven manufacturing plant—a part where losses cannot be avoided unless efficient equipment is used. The straight road to economical operation demands power transmittal with the least possible waste.

Skayef self-aligning ball bearing line-shaft equipment will eliminate power losses and reduce other overhead charges such as, subrication, maintenance, rebabbitting, etc. That this is true is proven by a constantly increasing number of initial users and by a large per cent of repeat orders.

The booth is in charge of A. B. Vieth, Sr., H. Wood and J. A. McAllen.

Skinner Bros. Mfg. Co., Inc.

Direct Fired Heating Systems are shown and demonstrated at the booth of the Skinner Brothers Manufacturing Company, Inc., of St. Louis, Mo., and Elizabeth, N. J. Skinner Brothers Direct Fired Heating Systems are constructed for building where steam is not available, they are built on correct mechanical and scientific principles, and will thoroughly heat every cubic inch of open space in any building.

Other Skinner products displayed included the Skinner Revolving Door, Dven for japanning, enamelling and drying, Baetz Patent Heaters, Dust Collecting systems, etc.

M. G. Skinner, vice-president of the company, E. F. Tilley, Jr., and F. A. S. Wood, are in attendance during the week.

Norma-Hoffman Bearings Corp.

Norma Precision Ball Bearings, open, or separable, type, featured at the booth of the Norma-Hoffman Bearings Corporation, of Stamford, Conn., are intended for and successfully meet those conditions where high efficiency at high speeds over long periods is demanded. Its design and construction and method of mounting combine to minimize, to a degree not otherwise to be had, those service factors which reduce efficiency, hasten wear and shorten useful bearing life.

D. E. Batesole is in charge of this exhibit, and is assisted by F. W. Messenger, H. J. Ritter, and other members of the staff.

Hendrick Mfg. Co.

Mitco grating, with its rivetless construction and rectangular openings, is attractively displayed at the booth of the Hendrick Manufacturing Company, of Carbondale, Pa. Mitco gratings afford a rigid, well-designed, non-slipping floor. Its principal advantages are: Freedom from rattling, maximum lighting, maxi-

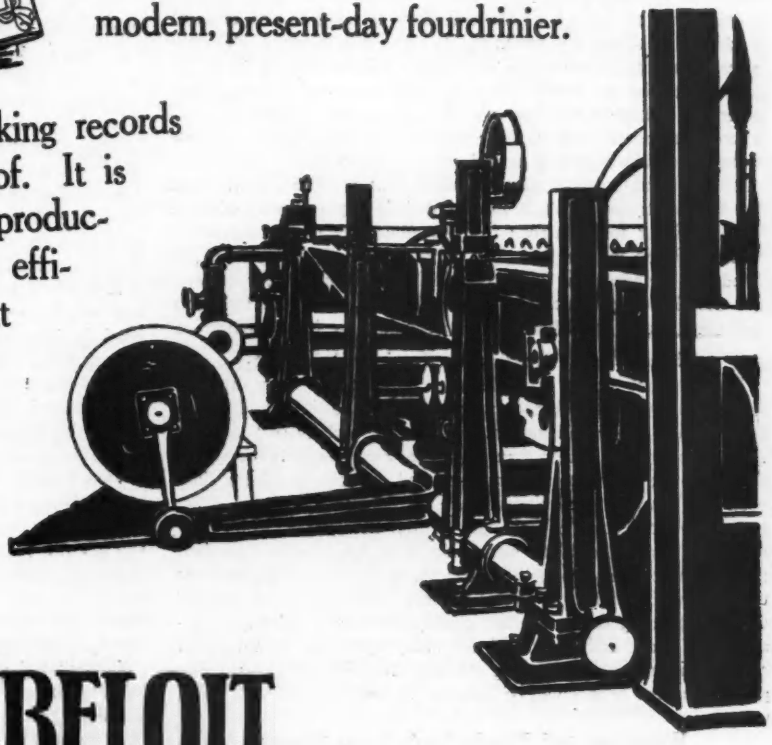
(Continued on page 53)

Insurance that Counts

YOU can secure most any sort of insurance nowadays—among others insurance against interruptions. But the best insurance investment against loss of time, interruptions in man power and machinery is in the NEW BELOIT FOURDRINIER, the modern, present-day fourdrinier.

The NEW BELOIT is making records that their owners are proud of. It is showing the way to greater production, greater profits, greater efficiency. It is insurance that counts—insurance whose premiums are repaid to you manyfold in a short time.

Let us send you actual testimony



The NEW BELOIT FOURDRINIER

Beloit Iron Works **Beloit, Wis., U. S. A.**

Since 1858 Builders of Paper, Board Mill and Container Plant Machinery

Demand for Paper in Philadelphia Slackens

Thanksgiving Holiday Interrupts Routine Although Early Days Were More Active—Specialized Trading Prevails in Fine Paper Market—Large Volume of News Print Orders Transacted for Future Deliveries—Normal Winding Up of Business Year Expected

PHILADELPHIA, Pa., November 30, 1925.—With a holiday week, trade somewhat slackened in its business pace, due to interrupted routine in industrial life, and to the absence of executives and heads of firms on a brief vacation over the Thanksgiving celebration. Though there was not as much trading in the mid-week because of the break in business routine, the earlier days were slightly more active than the preceding week, particularly for some grades of the fine paper group, which show that there is a tendency on the part of the consumer to take advantage of any price concessions which may be offered for future deliveries. As a whole, the paper market has become a year end affair, and with all indications of a normal winding of the 1925 business cycle and customary holiday activity of meeting belated rush hand to mouth buying.

Orders for News Print at New Prices

The reduction in news print for 1926 deliveries has been responsible for the larger number of orders in bulk that have been coming into the offices of those dealers catering to this class of trade. Publishers are beginning to take advantage of the low priced products of the Canadian mills and are placing their requirements for the entire half year with generous orders of considerable volume extending over the six month's period of advance purchases. When the announcement was made that the Canadian manufacturers would reduce their news print to a quotation that made it cheaper to patronize home manufacture, the local distributors began to curtail their importations and have been advising their patrons to take advantage of the attractive values offered by the American mills. Now that stocks in the hands of the consumer have been depleted, there is freer demand for the domestic grades and buying is extensive from both city and out of town publishers, now contracting for future deliveries.

Fine Papers Holding to Specialized Market

For the past month the fine paper market has been more or less a matter of specialized trading and as the closing days approach there is marked inclination to confine orders to these seasonal requirements rather than to general purchases. Some grades of bonds are showing more activity and are mostly of the lines used for business correspondence, announcements, and other usages co-incident to the changes of the new year. Publishers' needs in book papers are slackening with the closing days and there is a tendency to hold off on the part of the larger firms until after the holidays. While present requirements of the advertising-printing trades are not gratifying there is evident a possibility of more active demand for many specialties in this class of papers during the coming month, inquiries indicating that preparation for broadening of business in the new year are under way.

Wrappings and Boards Lead Coarse Papers

While the holiday stocking has been met there is continuance of broadly scattered hand to mouth buying of wrappings and all the grades of news and chip boards, the latter being in demand among the box manufacturers. Krafts show a steadier price trend than they have maintained for many months. It may be that the reduction of stocks of foreign manufacture which were freely offered here in the early months of the year have been materially affected and that new mill products have been more stabilized as a result of the imposition of a tax on the imported product which became effective this year. Paper box manufacturers have been busily engaged in meeting the holiday demand for fancy boxes and for the standard containers of seasonal merchandise such as those used by knit goods, hosiery, clothing and like industries.

Paper Men Hear Views of National Executives

When the members of the Wrapping Paper Division of the Philadelphia Paper Trade Association met in special session on Monday, last week, at the Bourse Restaurant, they were treated to an interesting and informative talk, given by Vice President J. C. Mallalieu, of the Wrapping Paper Division of the National Paper Trade Association, who was especially invited as the guest of the dealers enrolled in the local organization. Vice President Simon Walter, of the Philadelphia Association, and head of S. Walter, Inc., presided and on behalf of the Quaker City distributors welcomed their national executive, and associate of the George W. Millar Company, of New York, and his companions from the National Association headquarters, Statistician N. A. Schoenbacher, and Secretary William G. Ridgway.

There were present the full quota of members belonging to the Wrapping Division and several outside dealers not connected with the organization but who are prominently identified with the local trade and who were specially invited to hear the discussions on the survey of the wrapping paper industry recently undertaken by Special Committee of the National Paper Trade Association with its recommendations as to the solution of the small order problem. Each of the officials, represented among the speakers, gave an illuminating and informative address on this important factor of wrapping paper distribution which will prove of valuable service in the matter of small order shipments and the handling of these to the profitable advantage of the dealer.

Ever since the post war days began the problem of small orders has been a perplexing one to the dealers. The high cost of overhead in handling the small orders now dominant in the paper industry has long vexed the distributors and the survey of this part of trade activities made under the guidance of the National Association is being laid before the distributors with a view that it may be helpful in answering the question of how to carry on this class of business in a remunerative way.

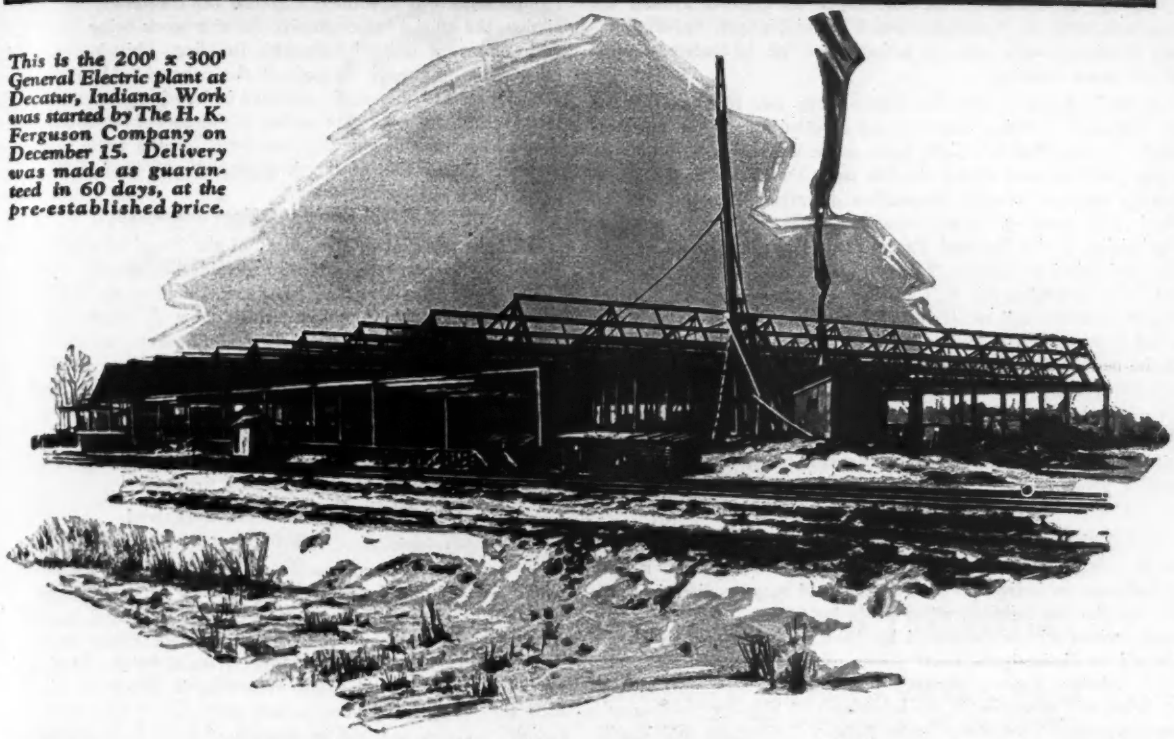
Vice President Mallalieu particularly urged the members of the local Association not to take for granted ideas as to the best ways of merchandising paper as based on the experience of war and prewar years, but that each member should analyze his own business minutely, and by departments, in order to reveal how closely the local situation corresponds to the drift away from old standards revealed in other markets by the investigations of the Survey Committee of the National Paper Trade Association.

Following the addresses and discussions by the National Executives, there was a resume of the wrapping paper industry presented by the President of the Philadelphia Association, Morgan H. Thomas, and supplemented by encouraging remarks on the present business and its brighter future indicated by the growing demand for all grades of paper. Upon motion of President Thomas, the Quaker City dealers present gave a rousing vote of thanks to their visiting associates indicative of warm appreciation extended for the very hopeful advice presented in the various discussions.

Fine Paper Men Meet

Expressions of appreciation for the many helpful factors which have been disclosed to the trade regarding its relations with the master printers were freely extended when the fine paper dealers met in the mid week at the Bourse Restaurant and there discussed the series of lectures which have been given throughout the

Big Business Builds The Ferguson Way



This is the 200' x 300' General Electric plant at Decatur, Indiana. Work was started by The H. K. Ferguson Company on December 15. Delivery was made as guaranteed in 60 days, at the pre-established price.

You can't build this winter if you wait for an architect!

BUT the H. K. Ferguson organization will start your work NOW. Moreover, it will give you a written, binding guarantee to deliver the building you want, on a definite date—30, 60, or 90 days hence—regardless of weather conditions.

This same guarantee will cover the correctness of design, construction work and the total cost. *It is a guarantee that means your satisfaction without argument.*

Remember, the Ferguson organization is internationally known as a specialist in industrial construction. The finest type of equipment and ample stocks of materials in the hands of this highly specialized organization enable Ferguson to build under the severest winter conditions and guarantee each step of the work.

The H. K. Ferguson Company is building on this basis today—this month—for Procter & Gamble, Selby Shoe, Union Drawn Steel, Continental Gin, Todd Protectograph, The Lamson Company and numerous other nationally known concerns.

Each of these companies will take delivery of a new Ferguson building this winter on the regular Ferguson guarantee basis.

If you need more floor space, and need it quickly—get in touch with Ferguson now. You will be astounded to learn what worthwhile savings Ferguson can make for you both in time and money, even when building during the winter months. Call at one of the Ferguson offices. Or write, wire or phone for a Ferguson executive.

THE H. K. FERGUSON COMPANY

Cleveland Office: 4900 Euclid Bldg.; *Phone:* Randolph 6854
New York Office: 25 W. 43rd St.; *Phone:* Vanderbilt 4526
Detroit Office: 841 David Whitney Bldg.; *Phone:* Cherry 3127
Other Offices at Birmingham, Alabama *and* Tokio, Japan

Ferguson
GUARANTEED BUILDINGS

autumn by the Fine Paper Division of the Philadelphia Paper Trade Association in its educational campaign conducted for the benefit of the Typothetae. With President Norbert Considine, of the Paper House of Pennsylvania, and of the Considine Importing Company, as Chairman, the fine paper distributors around the luncheon table on Wednesday heard David Lindsay, Jr., of Lindsay Brothers, report on the activities of the Executive Council in its recent meeting.

A special guest of the Fine Paper group was Norman Fort, of the Thomas W. Price Company, not enrolled among the membership. It was that he might learn more of proper solutions of many problems confronting the fine paper merchants in the Philadelphia markets through Association discussions that he was invited to the meeting. It was announced that N. A. Schoenbacher, Statistician of the National Paper Trade Association, will talk to the local printing trade on "Lower Paper Costs" at the next meeting. On December 14, S. L. Wilson of the American Writing Paper Company will speak on "If I were a printer." It also was voted to transfer the final talk by Mr. Wilson to the auditorium of the new Poor Richard Club house at 1319 Locust Street, which will be open by that time. The attendance at these lectures has been growing and the chairman of the committee in charge of the arrangements, George W. Ward, asked the co-operation of all of the houses to increase the attendance, particularly of the smaller printers.

Dual Osbourn Associations Formed

Two distinct organizations have been formed under the titles of the R. C. Osbourn Paper Company, an incorporation, and Robert C. Osbourn, an individual concern, and will occupy offices in Suite 301, the Bourse Building, 5th and Market streets. While the two organizations will be controlled by the same interests they will be devoted to distinctly different forms of paper distribution. The R. C. Osbourn Paper Company, Inc., with Robert C. Osbourn at the helm, will specialize in the handling and bids for Government paper contracts exclusively, while Robert C. Osbourn will handle mill accounts for sale to the paper distributors and jobbers only with direct mill shipments. The latter concern will be the individual firm of Robert C. Osbourn, who long has been identified with the paper distribution trade in this city and in New York, having a record of more than thirty years association with the industry.

Mr. Osbourn began his paper career with Charles M. Stoever & Co., more than three decades ago and in 1897 became its Manager at the New York headquarters and later came to Philadelphia as manager and buyer of the Flat Writing, Envelope and Card Department of the Quaker City branch. Upon the dissolution of that firm he became affiliated with the Garrett-Buchanan Company of this city, as manager of its Flat Writing, Envelope and Card Department, remaining with this concern until 1907 when he embarked in business on his own account. With the organization of the new Osbourn companies, there will be conducted coarse and fine paper distribution enterprises along the lines of business conduct involved in the individual concerns.

Western Box Makers to Hold Annual Convention

The National Association of Paper Box Manufacturers, with headquarters in this city, announces that the Western Division has decided to hold its Annual Convention, January 27, 28 and 29, 1926, in Chicago, decision to this effect having been made at the November meeting of the Advisory Board of that Division. A program was tentatively arranged, details of which are to be worked out and a definite program formed within a short time, when announcement will be made of the place, business sessions, entertainments and other matters pertaining to the convention plans. T. W. Ritchie was appointed General Convention Chairman to supervise and appoint the various committees. One of the sessions will be devoted to "Sales Analysis and Marketing Problems," with discussions on the subject by prominent manufacturers. Another problem that will occupy the convention is that of "Waste" as it applies to the box industry.

The National Association announces from headquarters at 112 N. Broad street, that at the recent meeting of the Board of Directors there was appointed a special tax consultant for the association, the official representative for this work being Wolf & Co., with offices at 602-604 Lafayette Building, Philadelphia, and in other cities scattered throughout the country. Members of the Association and the supply industry included among the associate membership will have free access to the tax service and consultation. Plans are now under way here for the perfection of the National Convention of the Association to be held in this city in May, 1926.

Royal-Kendig Offices Removed

With the removal of the offices of the Royal-Kendig Company from 614 Chestnut street, the Philadelphia headquarters of George La Monte & Sons also have been transferred to the new address. The Royal-Kendig Company, which now is quartered in the Washington Square Building, 7th and Chestnut streets, in Room 506, is local distributor of the Safety Check Papers manufactured by the George La Monte and Son Company of New York, with H. Evert Kendig as its local representative. The old offices were located in the building now being torn down to give place to the construction of the new Public Ledger Building and just a square away from the present offices of the firm.

Fleming Paper Co. Dissolved

The former business of Harry J. Fleming has been transferred to E. Latimer, Jr., and the H. J. Fleming Paper Company, of which he was head, has been dissolved. The Fleming Paper Company has for the past year been located at 22nd and Somerset streets, to which it removed from North Front street. The firm specialized in the manufacture of small roll products and die wiping papers under the Cloud Wipe brand. The good will of the firm and its lines of manufacture have been taken over by the Latimer concern and will be distributed from its headquarters at 126 N. 4th street. Mr. Fleming has been engaged in the paper business on his own account for the past four years and previously was connected with the small roll and die wiping department of the Paper Manufacturers Company.

Quartz Company to Erect New Plant

Plans for the erection of a new plant to be established in St. Louis, Mo., were announced during the week when the Philadelphia Quartz Company, the largest manufacturers of silicate soda in the world, made known its designs to the St. Louis Chamber of Commerce along this line. The Company has main offices in this city and factories in Rahway, N. J., Chester, Pa., Gardenville, N. Y., Anderson, Ind., and Kansas City, Mo. It distributes large quantities of silicate soda to the container and corrugated board manufacturers and other branches of the box manufacturing and paper converting industries. The silicate is used for adhesive purposes.

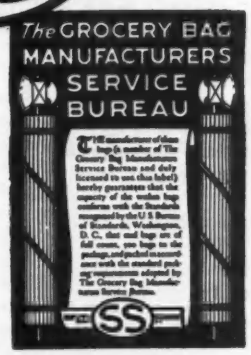
Estate of David M. Patton Disposes of Business

With the settlement of the estate of the late David M. Patton, the heirs have disposed of the paper brokerage business conducted by him from offices in the Commonwealth Trust Building. Mr. Patton has a large following among the consumers of bulk quantities of book papers and other lines of fine grades conducting a mill representation business. His death occurred early this year and the heirs have been winding up the business. The offices in the Commonwealth Building have been closed and the business discontinued.

Fort Dearborn Paper Co. Incorporated

The Fort Dearborn Paper Box Company, of Chicago, Ill., incorporated recently with a capital of $40,000, to manufacture boxes, containers, etc., is managing well under the direction of James H. Gillison, Samuel Blair, and Edward B. Sode.

This emblem certifies standard size



and this label will guarantee standard size, full count, & uniform packing.

Members Of The Grocery Bag Manufacturers Service Bureau.

Atlanta Paper Company
Atlanta, Ga.
Badger Bag & Paper Co.
New York City
Alfred Bleyer & Co.
Brooklyn, N. Y.
Columbia Bag & Paper Corp.
Long Island City, N. Y.
Columbia Paper Bag Co.
Baltimore, Md.
Continental Paper & Bag Mills Corporation
New York City
The Grand Lake Co., Inc.
New York City
The Howland Bag and Paper Company, Dexter, N. Y.
The Lawrence Bag Company
Middletown, Ohio
Newman-Kohn Paper Co.
Brooklyn, N. Y.
Schorsch & Company
New York City
The Security Bag Company
Lockland, Ohio
Trinity Bag & Paper Co.
New York City
Union Bag & Paper Corp.
New York City
Victory Bag & Paper Co.
Chicago, Ill.
Wortendyke M'f'g Company
Richmond, Va.

THE *emblem,* pictured above is recognized by the U. S. Bureau of Standards as certifying that the manufacturer of the Grocery Bags—upon which, or in connection with which, it appears—is complying with their requirements in respect to "Standard Size" based on cubical capacity.

The *label,* also pictured above, is a guarantee not only as to size, but full count and uniform packing as well. Its use signifies that the manufacturer has met all governmental size-requirements, and in addition guarantees the dealer and user full count (500 bags to the package) and uniform shipping-bundles.

The manufacturers entitled to use this label have already begun affixing it to their goods. They have been straining every nerve to make whatever changes may be necessary to give you and your customers a uniform product. Even a slight change in such a volume of production takes a considerable time. The Bureau's program, howevever, is now well under way. Some shipping-units, with the labels affixed, have probably reached you already. They will appear in steadily increasing quantities until within several months all goods of the members herein listed will carry the *label.* Then, when your old, unlabeled stocks are cleared and you are protected, the story of the *label* will be told to your customers, the Retail Merchants.

Watch for the labels. They are the guarantee of everything you and your customers expect in Grocery Bags.

Look for the orange-and-blue Label

THE GROCERY BAG MANUFACTURERS SERVICE BUREAU 53 Park Place, New York

Ontario Paper Industry in Splendid Condition

Mills Show Considerable Activity and Output is Being Gradually Increased—Good Volume of Business Reported for Various Grades—Distribution Proceeding Evenly—Kraft in Better Demand—Backus Plant Officially Named Kenora Paper Mills

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ontario, December 2, 1925.—Most of the jobbers are now getting ready for their annual stock taking and report that the distribution of paper is going on satisfactorily for this season of the year. While some ranges are quiet, the trade as a whole appears to be enjoying a good volume. Throughout the province, business conditions are improving and the paper trade is keeping step with the new state of affairs. The envelope producing and allied lines have been gradually increasing their volume to the various commercial and manufacturing concerns and the paper converting line generally has been better during the past few weeks.

So far as the mills are concerned they show considerable activity and are gradually adding to their output. The book paper units are operating to capacity and the Port Arthur branch of the Provincial Paper Mills has sold its entire output for the coming year, mostly for domestic consumption, although a percentage of the output will be marketed abroad. Among the lines are superior half tone, sulphite blank, envelope and ground wood book papers.

The prices on all lines of paper remain firm and show no signs of weakening. In this respect the market all through 1925 has been of a healthy character and, while demand has fluctuated much at times, there has been little or no price cutting to add new worries to the situation.

In the higher grades of book, bond and ledger there has been some falling off, but a greater call has taken place for the cheaper and medium qualities. There is a very fair requisition for book paper from the publishing trade. The printing industry at present is only moderately busy and is not a great consumer of paper. In many of the smaller centers the printers are busier than they are in Toronto.

Wrapping papers are moving only in fair volume and jobbers in these lines and paper bags say that they could handle much more trade. Compared with other ranges the wrapping paper trade is not as active as it should be and dealers are wondering what is holding it back at this juncture.

Box boards are in active requisition and mills are working practically to capacity and in some instances are behind in orders. Paper box producers are seasonably busy as they always are in advance of the holiday trade. The demand for containers for Christmas has been above what it was last year at this period.

New Name for Backus Mills

The new name for the pulp and paper mills at Kenora, Ont., owned and operated by the Backus interests, is Kenora Paper Mills, Ltd. Since commencing operations the mills have been conducted through the Keewatin Lumber Company, pending the selection of a suitable name for the new concern. The output of the news print mill is 120 tons daily, which will be more than doubled in the next few months. The citizens of Kenora are much pleased with the selection of the new style for the firm as it will be a factor in advertising the town.

Passing of Veteran Forester

Many friends in Toronto learned with deep regret last week of the death of R. H. Campbell, who for many years was Director of Forestry for the Department of the Interior. He was succeeded by E. H. Finlayson. Mr. Campbell was born in Strathroy, Ont., in 1867, and was one of the first members of the Canadian Forestry Association, which was formed in 1900, when he was elected assistant secretary and treasurer. In 1907, on the resignation of Elihu Stewart, of Toronto, Mr. Campbell was appointed superintendent of forestry, a title which was later changed to director of forestry. The organization of the forest reserves was brought to a high state of efficiency by Mr. Campbell and the task of protecting the forests from fire, both inside and outside of the reserves, was first given special attention by his department.

New Plant Starts Operation

Word has been received in Toronto of the opening of the new plant of the International Wood Products, Ltd., New Westminster, which tock place recently. The company agreed to spend $75,000 on the plant when arrangements were made with the city regarding the site. The outlay has been three times this amount.

Better Demand for Kraft

The Hodge-Sheriff Paper Company, Toronto, who are selling agents for the Wayagamack Pulp and Paper Company, Three Rivers, Que., report that there is a better demand for kraft paper. The decided improvement in the market for kraft paper in the United States has naturally been reflected in better prices for sulphate pulp. The Dryden Paper Company, Dryden, Ont., are sharing in the larger volume of business. The Wayagamack Pulp and Paper Company is more and more developing its foreign trade, where better results are being obtained, while the Dryden Paper Company is feeling the improved business throughout the west and the keener demand there for kraft paper.

Popular Pulpwood Man Elected

Among the number of popular men connected with the lumber and pulp industry of Eastern Canada, to be returned in the recent Federal elections, is Fizalam William Perras, wholesale lumber and pulpwood dealer, of Gracefield, Que. Running under the Liberal colors he was elected by a substantial majority in Wright County, Que. Mr. Perras has been in the lumber and pulpwood business at Gracefield for the last 27 years. Besides his active business interests he has found considerable time to devote his talent to public affairs, being Mayor of Gracefield, Que., for 14 years and Warden of the County of Hull for 1921-1922. He was born in the city of Hull and was educated at Ottawa University and united in marriage to Miss Gertrude Grace in 1902.

Notes and Jottings of the Industry

H. B. Donovan, of the Canada Paper Company, Toronto, who was confined to his home in Oakville for a few days, is able to be around again.

E. H. Smith, manager of the Cornwall plant of the Howard Smith Paper Mills, and William Aird, manager of the export department of the company, spent a few days in Toronto lately calling upon the trade.

The Canada Paper Company will redeem on February 1 next all the outstanding second mortgage, thirty year, 6 per cent bonds which were issued in 1908. The bonds will be redeemed on the date mentioned at 105 and accrued interest.

The Buntin, Reid Company, wholesale paper dealers, Toronto, in order to ascertain if the service they render is satisfactory, mail a return post card with every order, on which a number of questions are asked, such as—are your orders acknowledged; are your orders handled with the despatch you require; are your goods properly packed; do you find our advertising of interest; can we improve our service to you?

Many friends of E. G. R. Clarke, Ontario representative of the Nashua Paper Company, Peterboro, will sympathize with him in the death of his mother, Mrs. E. F. Clarke, whose husband was a former Mayor of Toronto.

A New Trademark

An Old Concern

DOWNINGTOWN MANUFACTURING COMPANY
Paper and Pulp Mill Machinery
EAST DOWNINGTOWN, PA., U. S. A.

Valley Safety Conference Arouses Great Interest

Paper Mills and Allied Industries Cooperating for Success of Forthcoming Green Bay Event—Judson G. Rosebush, President of Patten Paper Co., to Speak—Hammermill Paper Co., Erie, Pa., Sending Representatives to Obtain Ideas

APPLETON, Wis., December 1, 1925.—This section of the Fox River Valley will have a large representation at the valley safety conference, which will take place in Green Bay, December 9. Many of the paper mills and allied industries are cooperating for the success of the enterprise. It is expected that there will be between 500 and 600 delegates at the conference. So far four large companies have asked for a total of 74 reservations at the evening banquet. Sessions will also be held in the morning and afternoon.

It is estimated that 250 places have been reserved thus far, and Green Bay reservations will add about 300 more. The Wisconsin Public Service Corporation will send sixty men from its various plants, the paper mills of the Kimberly-Clark Company will send twenty, the Appleton Woolen Mills, manufacturers of papermakers' felts, will send four, and a number of other concerns have asked for reservations of from five to twenty places.

Judson G. Rosebush, president of the Patten Paper Company, of Appleton, whose address at the National Safety Congress at Cleveland last summer is still being talked about all over the country, will be one of the chief speakers at this sectional conference. The subject will be, "The Why of the Safety Movement." It is directed to both employers and employes and will show why this movement, instituted a comparatively few years ago, has leaped to a prominent place in all industries.

The Hammermill Paper Company, of Erie, Pa., will send three representatives to the meeting for the purpose of obtaining ideas for the sectional conference to be held in that city next year.

The Central Paper and Specialty Company, a newly organized Dubuque firm, has opened a wholesale paper house at 180 Main street, in Madison, Wis., with J. P. Arensdorf as president, Theodore Engler as vice president, and A. B. Weber as secretary and treasurer. These officers, together with James Saul and J. V. Weber, compose the board of directors.

Alexander Donates Gymnasium for Lawrence

L. M. Alexander, president of the Nekoosa-Edwards Paper Company, of Port-Edwards, Wis., has donated a total of $200,000 for a new gymnasium for Lawrence College, of Appleton, it became known at the inauguration exercises this week, when Dr. Henry M. Wriston, formerly of Wesleyan University, Middletown, Conn., was installed as the new president of the institution.

Mr. Alexander, who is president of the college board of trustees, presided at the exercises and read the inauguration service. It was he who gave to Lawrence College the present Alexander gymnasium a number of years ago. Lawrence has had a very healthy growth since then and its athletic activities have outgrown its present quarters. Mr. Alexander recognizes this and was the first to start a fund for the construction of a new one.

The paper manufacturer's gift includes $150,000 for construction and $50,000 for an endowment maintenance fund. It will now be up to the college to raise the remainder of the $500,000 gymnasium fund, of which $300,000 will be used for construction and $200,000 for maintenance endowment. Students and alumni have already pledged $50,000, making about one-half of the total still to be raised.

Just as Mr. Alexander is interested in a new gymnasium for Lawrence, another paper manufacturer, George A. Whiting, of Neenah, this year gave to the institution its new athletic field and field house, at a cost of about $50,000.

To Hold Hearing on Flambeau River Dam

The Wisconsin Railroad Commission was to hold a public hearing this week to investigate the operation of a dam over the Flambeau River at Park Falls, which is owned by the Flambeau Paper Company and the Wisconsin Realty Company, and also to determine the level of water to be maintained.

Two new buildings are being erected for the Riverside Fibre and Paper Company, of Appleton. The company obtained a building permit to construct a new warehouse of concrete and brick material, the building to be 30 feet wide, 60 feet long and 14 feet high. C. R. Meyer & Sons Co., of Oshkosh, have the contract. At the same time the company is putting up a new pumping station for its filter plant, the building to be 12 by 28 by 10 feet in size, and the material to be of brick, concrete and steel.

Currency Hidden in Bags

Fragments of $20, $10 and $5 bills flying in all directions and not a whole bill in the lot was the sight which greeted Orrie Coats, of Appleton, one evening recently, while he was at work in the rag room of the Neenah paper mill of the Kimberly-Clark Company in that city.

Coats was employed on the rag cutter and while putting a bale of rags through the machine to be cut into small pieces, his eyes opened wide at the sight of hundreds of pieces of United States currency mingled with the rags as they came from the cutter. The machine was stopped but too late to save a whole bill. The pieces were gathered together and will be sent to the Treasury Department. Bank authorities think a large sum of money was hidden in the bags.

Charles Block Passes Away

Charles Block, 51, Kaukauna, for 35 years an employe of the Outagamie Paper Company of that city, and for the last 12 years assistant superintendent of that concern, died Tuesday noon. He was born in Kaukauna. Funeral services were conducted this morning.

While cleaning up around a paper machine in the Thilmany Pulp and Paper Mill in Kaukauna one day this week, Harold Giesbers, an employe of that concern, dropped an iron shaft weighing about 125 pounds and, as it fell to the floor, a sharp edge cut off the forefinger on his right hand at the first joint.

Insurance Controversy Postponed

For the second time this year the legal contest over the payment of insurance involved in the fire indemnity due the recently dissolved paper manufacturing firm of the Keystone Paper Mills, of Upper Darby, Pa., has been postponed. The case was to have been tried in the Courts in Media this month but has been again postponed until the March term of court after having previously been delayed from a hearing scheduled for July. There are 28 companies involved in the disputed policies for the indemnity of the fire damages which resulted in the destruction of part of the mills earlier in the year. The Keystone Mills, located in Upper Darby, near Philadelphia, were more than 100 years old. In recent years they were given over to the production of Kraft and wax papers under the ownership of Allan W. Lindsay. The remainder of the mills were disposed of by sale a few weeks ago to the P. R. T. Company as an electric railway terminal. At the time of the sale to the railway company but two of the buildings were standing, the remaining four having been either partially or totally destroyed in the fire last May. The proprietor for the time being is retired from the paper manufacturing business pending the settlement of the insurance suit.

Conclusive Proof

When A Customer Reorders

It means he is satisfied and the actual performance of the machine supports all claims made for it. But, when a repeat order is received by long distance telephone service it shows that the user realizes more than ever that each day of delay means a waste of money and consequent profits.

In November a large mill located in the Northwest installed a Voith Inlet. Five days after the installation an order was received over the long distance lines for three additional Inlets—conclusive proof of the merits of this patented device.

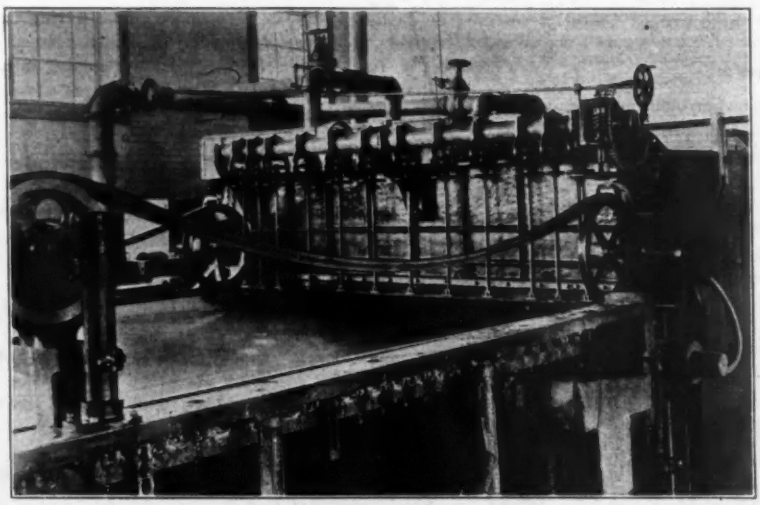
There, the Inlet is making a paper of better formation free from lumps and foam spots and of even caliper across the entire sheet. The Voith Inlet has made good in this installation as it has in one hundred others and it will do the same for you.

VALLEY IRON WORKS CO.

APPLETON, WISCONSIN

New York Office: 350 Madison Ave.

Don't Stand Idle While Others Are Preparing



During the past month ten large manufacturers of paper commenced preparations for the better business that is bound to develop in 1926. Their preparations will make it possible for them to produce better paper at a greater speed and at a lower cost.

This will be accomplished by the Voith High Pressure Stock Inlets they are installing. Four of these manufacturers already have one or more of the Inlets and are putting in others.

Your copy of an illustrated booklet is ready telling of the Voith Stock Inlet and what it will accomplish. Write for it today.

International Paper Developments in Quebec

Power Plant and Pulp Mill to be Constructed on Quinze River—Thirty Million Dollars to be Expended in Province Within Next Two Years—Belgo-Canadian and St. Maurice Merger Negotiation Details Announced—Lord Rothermere on Canadian Wood Pulp

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., December 1, 1925.—The International Paper Company is reported here to have made another important deal in extending its activities in Canada. The company is said to have purchased all the timber limits tributary to the Quinze Falls in the northwestern Quebec, including the important O'Brien and Bronson limits. All these limits are in the territory known as the Rouyn gold fields, and as hundreds of prospectors are working in this district the fire hazard has been immensely inceased. It will be remembered that when the Porcupine gold fields in northern Ontario were opened up, that whole district was covered by a dense forest and the influx of prospectors was followed by forest fires of unparalleled magnitude. Not only was a vast quantity of timber utterly destroyed, but scores of lives were lost and many settlements and towns completely wiped out. Up to the present time the Quebec Government, at great cost, has been able to prevent the spread of forest fires in the Rouyn district, but the menace is such that it would be better to clear off the timber, or, at any rate, make such clearings that any fire would not be able to spread over the whole district. It is now understood that arrangements have been made between the Provincial Government and the International Paper Company, by which all the timber in the Quinze district will be cleared. It is further stated that the company will proceed immediately with the construction of a power plant and pulp mill on the Quinze River, so that the timber may be converted into pulp on the spot.

As showing the extent of the International Paper Company's activities in Canada, which include the building of a new paper mill at Chelsea, the enlargement of the former Riordon mill for the manufacture of bleached sulphite at Kipawa from 170 to 250 tons capacity per day, doubling of the capacity of its news print plant at Three Rivers and other important developments, the International Paper Company within the next two years will make an expenditure of no less a sum than $30,000,000 in the purchased of the entire assets and undertaking of your company and are understood to summarize the negotiations between the government and President Graustein, of the International Paper Company.

Details of News Print Merger

Details of the negotiations between the Belgo-Canadian and the St. Maurice news print companies are contained in a letter to the shareholders of the former company from their president, M. B. Wallace, which reads as follows:

"At a meeting of the directors a proposal was received for the purchase of the entire assets and undertaking of your company at a price which will net all the shareholders $100 per share in cash, and a pro rata participating in a hodring company to be organized, 31¼ per cent of the stock of which will be transferred to your company. This will mean that in addition to the cash price shareholders will receive one share of the holding company for each five shares now held in the St. Maurice Paper Company, Ltd.

"This holding company will own the majority of the common stock of the St. Maurice Valley Corporation, which in turn will acquire through the issue of its bonds and preference shares and common shares, all of the assets and undertakings of your company, and about 85 per cent of the common shares of the Belgo-Canadian Paper Company, Ltd.

"Your directors believe that this is a very satisfactory price for your shares, and after due and careful consideration they have accepted this offer, which they recommend for your ratification."

Lord Rothermere on Competition of Artificial Silk

Lord Rothermere, proprietor of the *London Daily Mail*, and other publications, paid a visit to Montreal during the past week to look into the pulp and news print situation in Canada. He authorized an interview in his behalf by G. Ward Price, one of the special correspondents of the *Daily Mail*, who has just completed covering the seven months' trip of the Prince of Wales to South Africa and South America for his paper, and is now travelling with his chief.

"The increased demand for one of Canada's staple products, wood pulp, has led to a personal visit of investigation by Lord Rothermere," said Mr. Price.

"What strikes him, as a newspaper proprietor," proceeded Mr. Price, "is that all over the world the consumption of pulp is going up not only among newspapers, which are increasing their size, but also as the result of the striking development in the artificial silk industry, which is rapidly becoming a keen competitor with the newspaper for the supply of raw material.

"Lord Rothermere thinks that the time will come when the fortunate people in Canada who possess timber limits in accessible positions will benefit very greatly from the inevitable competition of wood pulp, which these tendencies will bring into operation.

"British newspapers already depend very largely for their supplies of pulp on this side of the Atlantic. Lord Rothermere is particularly interested in the Anglo-Newfoundland Development Company, the pulp producing company founded by his brother the late Lord Northcliffe, and which supplies much of the *Daily Mail's* consumption of raw material.

"A question is, Can Canada keep on supplying the increasing demand for wood pulp? and Lord Rothermere has been getting a general impression of the existing conditions in the paper and pulp industry in Canada. He has conferred with a number of leading business men on the assets of the industry interesting him as one of the large consumers of this raw material."

Orders From Australia

Orders for 20,000 tons of news print have been received from Australia by British Columbia paper mills, these having been diverted to Canada, owing to the strike of British seamen. This new business is, furthermore, the result of the coming into effect of the Canadian-Australian trade treaty, which gives Canada free access to the Australian market for news print.

C. B. Daring Paper Mfg. Co. Adds Rewinder

BRIDGEPORT, Pa., December 2, 1925.—The C. B. Daring Paper Manufacturing Company, which recently succeeded the Amboy Paper Company, has installed a slitting and rewinding machine and flat bed cutter and can furnish rolls from one inch up in width and cut sheets into small sizes.

The company is sending out samples of white and colored Valley Forge bristols and chocolate layer board.

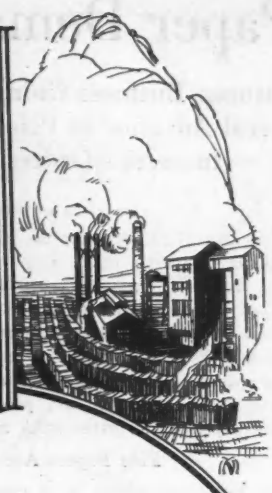
It has bristols in stock in size 22½ x 28½ in 90, 100, 120 and 140 pounds. The price is 4½ cents per pound mill for ten reams or more, on all colors with the exception of oxblood, corn and canary. These are 4¾ cents mill. Under ten reams there is an additional charge of ¼ cent per pound.

The samples of chocolate are a new shade which the company has in size 23 x 29, in the 9, 12 and 15 points; also 22 x 30 in the 12 point. Price 5 cents mill.

The company carries all the above in stock in quantities in the specified weights and sizes, and can make prompt shipment.

The trim of the company's machine is 72 inches.

This Question of "Service"



SO MUCH has been said and written about "service" during the last few years that the average business man is getting suspicious of the word. He knows that business isn't knight errantry, and that no commercial concern is operating with purely altruistic motives. So, as soon as he hears the word "service," he begins to grow skeptical. However, there is a kind of "service" which, though intended primarily to protect the seller, is also a benefit to the buyer.

For instance, we know that

Standard Oils and Greases

are made right, from the highest quality crude oil especially chosen for its lubricating oil content, and that they will, if used correctly, give the most satisfactory results.

But—unless they are used correctly, the buyer cannot expect full satisfaction. No one grade of oil or grease will lubricate every machine properly. If the buyer uses the wrong grade for his equipment, he will be disappointed—and will probably blame it on the quality of our products.

Thus, we would lose a customer who might easily have become a constant purchaser if he had known how to select the right grade for his purpose. And the customer loses the satisfaction and the reduced operating costs that he might have secured by using the correct grades of lubricants.

Therefore, it is with a motive which is primarily selfish that we offer to our customers the services of our lubricating engineers. When our engineers have made a survey of a plant, and have recommended the grades of oils and greases that are exactly suited to its equipment, we know that the customer is going to be satisfied, and that we can count on him to become a steady purchaser.

This service, which we have established for our own protection, is also a benefit to the customer, for it enables him to get full satisfaction from the products he buys, and to enjoy all the advantages and savings that result from perfect lubrication of his machinery.

We shall be glad to make a survey of YOUR plant if you will phone or write us. The service is free

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(Indiana)

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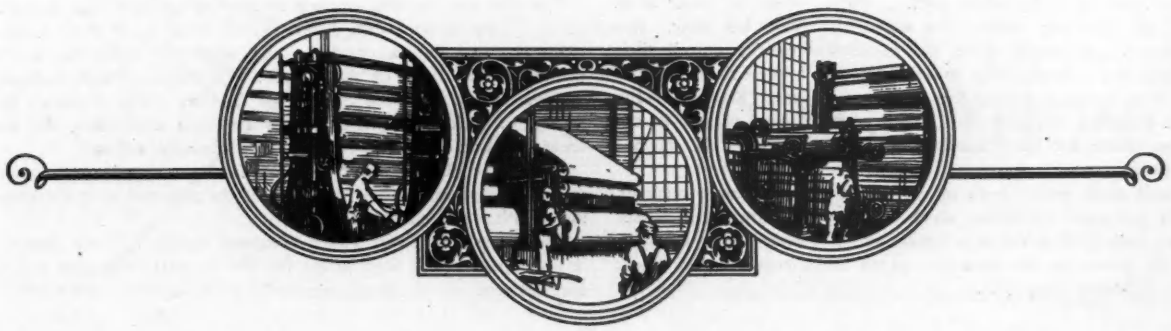

Paper Demand in Chicago Continues Excellent

Autumn Business Going With Real Vim—Fine and Coarse Paper Divisions Experience General Advance in Prices—Paper Stock Market Remains Stable and Practically Unchanged —Increased Orders From Stationery Trade Denote Very Large Christmas Business

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., November 28, 1925.—A generally increased demand in the whole paper trade of Chicago has substantiated reports that prices would change and go higher. The good business of last week, the postponed "fall business" which has been missed by most of the paper merchants, is at last here with real vim, and it gives the paper men real cause for optimism and good spirits. The advance is general, affecting both the fine and coarse paper divisions, and probably acting quicker upon the coarse papers. The paper stock market remains easy.

Fine Papers Are in Fine Shape

The fine paper market is in splendid shape, with no special demand experienced, with the possible exceptions of fine writing papers and sulphite bonds. There is a current rumor that the sulphite bonds are now changing in price, and there will be an advance to report next week. Taking a bird's eye view of all the fine papers and the fine paper companies, business is better this week than it has been in months, with increased orders even over last week, which was phenomenally good.

The fine paper market has been slightly under par for some time, and the new business is being hailed with the enthusiasm of youth: the merchants respond to the quickening market with great vigor. Touches of the Christmas trade are being felt and appreciated; Chicago fine papers are generally in such a condition that there is no fear of a decline of any kind before the first of the year, at least, and then if one comes it will be unexpected.

Coarse Paper Prices Advancing

The coarse paper market, on the other hand, is as yet the best paper market in Chicago. General prices have all been withdrawn, and an advance in prices of all kinds are expected this or next week. No. 2 Northern kraft has already jumped from the former 5-5¼ to the present 5¼ to 5¾. This is perhaps not to be the end of the movement.

The news in general is that coarse papers are selling as they never did before, excepting in the years of inflated rush periods. The coarse paper offices are in a state of turmoil and scurry, the result of confusion which has come from the sudden increase in business of last week.

According to reports from coarse paper dealers, the next advances in prices which are expected will be in the fibres and manilas. While the No. 1 kraft price is 6¼ as a maximum compared with 6½ of last week, this is merely a momentary eddy in the current of paper business, which is now sweeping through the Windy City.

Paper Stock Market Shows Little Change

Contrasted to the good business and the general advance in the other sections of the paper market, reports from the paper stock men are relatively poor. The market is stable, but slow. December is the month when the merchants usually curtail their buying, and now that this month is at hand, there is little hope of better business before the first of the year. There is really little business in paper stock, although the usual staples in the winter traffic are being handled in small degrees by the various companies.

Paper stock prices seem to vary with the different companies. There are some companies which have reported lower and higher prices than those which now appear in the PAPER TRADE JOURNAL, but the prices on the quotation pages are a concensus of prices from different companies.

The general good news of the week which the paper trade has been afforded has been affecting the stationery trade also. This is largely due to the Christmas business, which from all reports is especially large this year. Paper men in general have been cognizant of the good business of the stationers from the increased orders which they have received from them. Another report is to the effect that the stationers (and printers, too) are ordering larger quantities of paper than usual for the coming year. The year 1926 is expected to be one of the best years that business has seen since the war, barring 1920, the year of inflation, and the customers of the paper merchants seem to be preparing for the coming business whole-heartedly, which is, of course, a good sign for the paper trade in general.

Radical Price Changes Expected

With the condition of withdrawn prices, which is the trend this week in paper, it is expected that the coming week will witness radical changes in practically all the grades of paper. There is no way of telling how much the individual grades will jump, and these prices are not obtainable yet.

The word from Chicago at the present time is that of good solid business from all sides, with the leaning in favor of the coarse paper market. A cheerfulness is being maintained by all paper merchants because the immediate future appears so rosy, and there is no real indication that the general advance will change for the worse or even stop in its present channels.

General Notes of the Trade

P. Goldman, rag dealer, who was formerly located at his own plant on Fairview Avenue, has sold this property and is now at his new offices on Loomis street. Mr. Goldman purchased the Francis Hughes Paper Stock Company a few days ago, including good will and everything that goes with the business, and is now consolidating his own rag business with the paper stock trade of the Hughes company. His new offices are situated in the former plant of the Hughes establishment. It is a large plant, equipped for a big business, with special sidings for railroad cars, and large facilities for storing, etc.

Roy Campbell, traffic manager of the Butler Paper Corporations, with headquarters at the J. W. Butler Company, Chicago branch, was on November 3 elected president of the Chicago Shippers Conference, the largest consolidation of shippers west of New York. The territory of the organization is from Waukegan, Ill., to Gary, Indiana. Its personnel includes some of the greatest railroad men of the country, and 95 per cent of the shipping tonnage within its territory, which includes the metropolitan district of Chicago, is represented. Mr. Campbell received the honor with consummate grace, and is serving well in his new capacity.

The Chicago Paper Company is sending to the trade samples of its Foldwell semi dull paper, in the form of a small folded piece enclosed in an envelope, and with the following words printed on the front of the sample: "Printed specimen showing another use of Foldwell Split-Color Writing. The Printer's selection of Foldwell Split-Color for his own advertising did increase the selling value of this piece of printed selling."

Charters K. Higgins, Secretary of the Paper Trade Association in Chicago, presages some meetings of the association in the coming month, dates not decided.

The Tomahawk Kraft Paper Company reports a heavy business in kraft paper, with their prices for No. 1 kraft remaining at 5¼ for this week.

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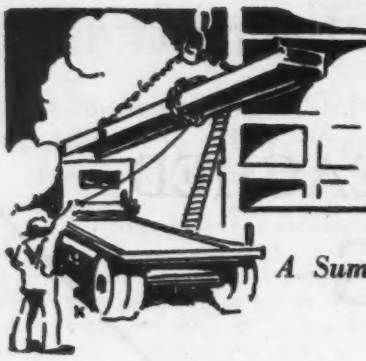

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Chillicothe, Ohio—The Mead Pulp and Paper Company is planning for enlargements in the power department at its local mill, with the installation of boilers and other equipment to increase the capacity from 5,000 to 7,500 hp. The expansion is estimated to cost in excess of $200,000. Headquarters of the company are at Dayton, Ohio. H. P. Carruth is manager at the Chillicothe mill.

Elizabeth, La.—The expansion plans of the Calcasieu Sulphate Paper Company, Inc., include the construction of a new one-story addition to its local mill, for which the superstructure will soon begin. Considerable additional machinery will be installed. J. E. Ryberg is construction engineer, in charge.

Chicago, Ill.—The Waterway Paper Products Company, 3201 South Kedzie Avenue, will take bids for the erection of its proposed one-story and basement addition, 80 x 300 ft., with one-story power house, 40 x 54 ft., estimated to cost approximately $200,000, with machinery. The mill extension will be equipped as a machine room. D. H. Burnham, 160 North LaSalle street, is architect. W. A. Strong is president.

Millwood, Wash.—The Inland Empire Paper Company is arranging an expansion and improvement program to be carried out over a period of months, involving, in all, close to $2,000,000. The work will include new mill additions and the installation of additional machinery, including power equipment. Judson G. Rosebush is president.

Dayton, Ohio—The Specialties Paper Company, Miami Chapel Road, has awarded a general contract to the Dayton Fabricated Steel Company, Dayton, for the construction of a one-story addition to its plant. Plans have been filed and work will proceed at once.

Stevens Point, Wis.—The Wisconsin River Paper and Pulp Company, Neenah, Wis., has engaged Orbison and Orbison, Appleton, Wis., engineers, to prepare plans for the proposed new concrete dam at its local mill. It will be 22 ft. high and 1,000 ft. long, on the Wisconsin River about three miles south of Stevens Point. C. A. Babcock is president.

Easton, Pa.—The Individual Drinking Cup Company, manufacturer of paper containers, etc., has work under way on a new local plant, estimated to cost about $65,000, and will have the structure ready for the machinery installation in the near future. The erection contract is being carried out by the R. T. & C. D. Stewart Construction Company, Easton.

St. Louis, Mo.—Work is being pushed to early completion on the new three-story plant for the St. Louis Label Works, Inc., 925 North Eleventh street, manufacturer of paper labels and specialties, located at North Market and Glasgow streets, and it is purposed to have the structure ready for the equipment installation in the near future. It will be 80 x 180 ft., estimated to cost about $100,000, with machinery. The Fruin-Colnon Construction Company, Merchants' Laclede Building, St. Louis, has the general contract.

Seattle, Wash.—The Zellerbach Paper Company, 807 Webster Avenue, has engaged Bebb and Gould, Hoge Building, Seattle, architects, to prepare plans for its proposed new building to be erected at First Avenue South and Atlantic street. It will be four-story, reinforced concrete, 120 x 150 ft., designed primarily for storage and distributing service, estimated to cost close to $125,000. It is expected to ask bids for construction at an early date. William Guthrie is local manager.

Appleton, Wis.—The Fox River Paper Company will soon begin superstructure work for its proposed new one-story addition, 80 x 105 ft., to be used as a machine room and filter house, estimated to cost $55,000, and will arrange for the equipment installation at an early date. E. L. Small is chief engineer.

New York, N. Y.—The International Paper Company, Pershing Square Building, is said to be arranging for the early erection of its proposed news print mill at Templeton, Ont., on the Ottawa River. It will consist of a number of units, designed for a capacity of 500 tons per day, with estimated cost placed in excess of $4,000,000, including machinery. The company has begun the construction of a hydroelectric power plant on the Gatineau River, about 7 miles from the mill site, to be used for service at the new plant. This latter project will cost more than $2,000,000, with transmission system.

Fort William, Ont.—Following the apportionment of about 6,000 acres of pulpwood properties among a number of paper and pulp companies in this section by the Ontario Minister of Lands and Forests, several interests have preliminary plans under advisement for expansion in their plants. These include the Thunder Bay Paper Company, Great Lakes Pulp and Paper Company, Provincial Paper Company, and the Nipigon Corporation, Ltd. The proposed work will include additional mill units for paper and pulp production, as well as auxiliary structures. It is said that the collective projects will cost close to $9,000,000. The expansion will begin early in the spring.

New Companies

New York, N. Y.—The J. F. Auer Paper and Board Corporation has been incorporated with a capital of $10,000, to manufacture and deal in paper and cardboard products. The incorporators are J. F. Auer, R. E. Stine and S. Tannenbaum. The company is represented by Burroughs & Brown, 200 Fifth Avenue, New York.

Chicago, Ill.—Officials of the West Virginia Pulp and Paper Company, 200 Fifth Avenue, New York, have incorporated a company of the same name under Illinois laws, with capital of $100,000, to operate in this state. Corporate headquarters will be in the Printers' Building, Sherman and Polk streets. The official incorporators are George E. Nelson, William H. Smythe and Joseph G. Reynolds.

Wilmington, Del.—Litex, Inc., care of the Corporation Trust Company of America, du Pont Building, Wilmington, representative, has been incorporated under state laws, with capital of $100,000, to manufacture fiber and composition paper receptacles and other products.

(Continued on page 76)

7 ADVANTAGES

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Cost Association Convenes at Buffalo

The Fourteenth Semi-Annual Convention of the Cost Association of the Paper Industry was held Thursday and Friday, November 19 and 20, at the Statler Hotel, Buffalo, N. Y. The program was carried out in its entirety, the following being a list of the speakers and subjects dealt with:

Mill Cost Methods—J. A. Whitman, S. D. Warren Company, Cumberland Mills, Maine.

Federal Tax Problems—J. A. Albrecht, B.L.L., of Albrecht, Maguire and Mills, Buffalo, N. Y.

Some Aspects of Wood Measurement—D. A. Crocker, Forester, American Paper and Pulp Association.

The Use of Scheduled Costs in Paper Mills—Harry D. Anderson, C.P.A.

Why the Accountant Should Co-operate in the Study of Waste Elimination—G. D. Bearce, Chairman of Committee on Waste of the Technical Association of the Pulp and Paper Industry.

In addition to the above program, a trip was made on Thursday afternoon through the Defiance Paper Company's Mill, at Niagara Falls, N. Y., through the courtesy of the executives of that company, and a very interesting afternoon was spent.

A dinner was held on Thursday evening, November 19, at which W. G. MacNaughton, Secretary of the Technical Association of the Pulp and Paper Industry, was the only speaker.

During the business session W. C. Scott, Assistant Treasurer of the Dill and Collins Company, was elected president of the Cost Association for the forthcoming year, in place of John E. Hyde, of the S. D. Warren Company, who found it impossible to act as president for another year.

V. D. Bierman, Comptroller of the A. P. W. Paper Company, Albany, N. Y., was elected Vice-President of the Tissue Division.

The address given by Mr. Crocker appeared in last week's Cost Section of THE PAPER TRADE JOURNAL, while Mr. Albrecht's address is printed this week, and the others will appear later.

Very interesting discussions followed most of the addresses and it should be noted particularly, that often the most instructive and useful part of these Conventions lies in such discussions, which bring out the different practices adopted in the gathering of cost figures.

The attendance at the Convention was somewhat disappointing, and the Executive Committee of the Cost Association was requested by a resolution, to take up this matter with the executives of the industry generally, for the purpose of bringing to their attention the importance of properly supporting these Conventions.

It was also decided to hold a Convention at the end of February, during the Annual Meeting of the American Paper and Pulp Association, when it is hoped that a larger attendance of executives can be secured.

New England Paper Merchants Re-Elect Officers

BOSTON, Mass., November 28, 1925.—The Annual Meeting of the New England Paper Merchants was held at the Harvard Club of Boston recently, there being twenty-five members present.

A good deal of time was devoted to the reports made by representatives of the local association at the national convention which was held in Chicago the middle of October.

The standardization in the paper bag industry which goes into effect December 1, came in for most favorable comment. Mr. Byrne explained the details of putting the plan into operation.

Special interest was shown in the standardization of sizes of toilet paper and tissues. An interesting program of subjects for discussion at the luncheons which the wrapping paper members and the fine paper members hold during the winter, was drawn up.

Many comments were heard that interest in association matters was greater at present than at any other time and a most successful year is forecast.

The following officers were reelected for the ensuing year: President, Hubert L. Carter, Carter, Rice & Co., Corporation, Boston; First Vice-President, Charles A. Esty, C. A. Esty Paper Co., Worcester; Second Vice-President, Royden Loring, Arnold-Roberts Company, Boston; Treasurer, Edward A. Eaton, A. M. Eaton Paper Company, Boston; Secretary, Floyd H. Blackman, D. F. Munroe Company, Boston; and Auditor, Clifford K. Judd, Judd Paper Company, Holyoke.

Boston Paper Trade Enjoys Holiday Boom

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., November 26, 1925.—Boston continues to enjoy its share of steady, conservative business, with a little boom noticeable in some spots. Those houses and manufacturers dealing in the holiday goods are just now in the rush stage and having some difficulties keeping up with the orders. This condition applies to the Kraft, wrappings and fine grade houses chiefly.

According to this week's survey, November has proved itself an unusually active month—a month that will carry one or two of the weaker ones along. November will help to take 1925 out of the lean class, according to most of the dealers in this section. In fact October, November and December are counted upon to pull the year through with a few credit figures.

The holiday trade has renewed the competitive spirit that has been lacking in Boston during the past few months. Right now the competition is keen for final 1925 business and new business for 1926. As a result the turnover has been great all along the line, stocks moving rapidly and collections coming in a little easier.

Papers for printers are in steady demand, with ledger material a close second. All kinds of stationery are proving rapid sellers, and, of course, greeting cards are at their best. The coarse market continues to share in the seasonal business, with the tissues and the paper box manufacturers. The coming holiday trade, with the general betterment in things industrially in New England, has made October and November two good months for the coarse division.

The rag stock division is gradually climbing the hill to better business but nothing like real business is anticipated until the new year begins.

The paper box men report better business. They say they have orders ahead that will keep them busy for some time. One well known paper box manufacturer, however, disclaimed any such condition stating that the business, while better than it has been for some time, is far from what it should be.

Cornell Buys Brown Paper Mill Property

ITHACA, N. Y., December 1, 1925.—Purchase by Cornell University of the property near Fall Creek on which the Brown paper mill was located, has been formally announced. The purchase price was not made public and no intimations were forthcoming as to the probable use which the university will make of its newest possession.

On September 2 last the Brown paper mill, owned and operated by Albert Brown, was practically destroyed by fire during a late afternoon blaze, entailing a loss of many thousands of dollars. Soon after, Mr. Brown considered rebuilding, but upon receiving an offer from the university for his property, decided to let it go. The site of the old paper mill, adjoining the Empire Paper Company plant, is along the flume from Fall Creek which feeds a number of plants in that part of the city. The sale of the property also included riparian rights in the flume.

To Present Specifications Report Dec. 10

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., December 2, 1925.—The Paper Specifications Committee which has been drawing up new specifications for the Government Printing Office for the coming fiscal year beginning March 1 has about completed its work and will present its report to the Joint Congressional Committee on Printing on December 10.

Here are Some interesting points about the IXL Continuous-tooth Herringbone Gears and Speed Reducers

Advantages of Continuous Generated Teeth with 30 Degree Helix Angle

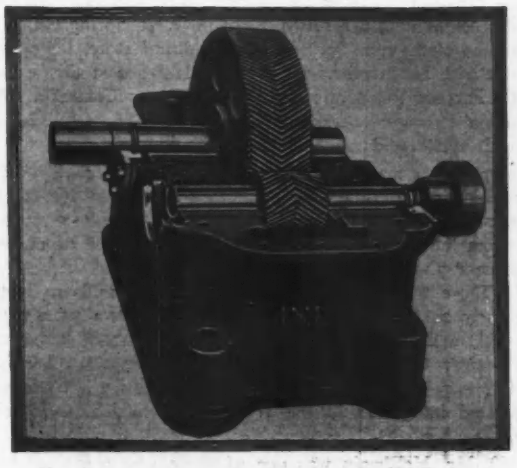
1. Greater load carrying capacity.
2. Greater Bearing-Surface per tooth.
3. Greater Strength per tooth.
4. No undercutting of teeth.
5. Extreme quietness of action.
6. Narrower faced gears to transmit same HP.
7. Elimination of Backlash.
8. Minimum vibration.

The full advantages of the herringbone principle of design with continuous teeth and a 30 degree helix angle are embodied in the IXL herringbone speed reducers. Gear teeth are not hob cut but are *generated* on machines of special design.

USES

Lumber mills, paper mills, rubber mills, sugar mills, cement, lime and gypsum mills, manufacturers of hoisting and conveying machinery and many others are especially interested in this type of reducer.

IXL herringbone gears and speed reducers are especially adapted for heavy duty drives—high speeds—continuous service and efficiency—and where vibration and noise are objectionable.



IXL Herringbone Reducers are made in single, double and triple reduction units, capacities up to 150 H.P. and reduction ratios up to 350 to 1.

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Obituary

John S. McElwain

HOLYOKE, Mass., December 1, 1925.—John S. McElwain, aged 97, the oldest paper manufacturer in Western Massachusetts and probably the oldest in all New England, died early Wednesday morning at his home, 209 Linden street, after several months of failing health. Up to within a year or two his memory was keen and his interest in men and affairs as robust as ever. Most remarkable was his keeping in the ranks of active men when generally men of his age have been forgotten. Yet at 90 the president of a leading Holyoke bank said that he had rather have Mr. McElwain's opinion of a banking matter than any of his directors; and he got in and out of the automobile with which he attended the meetings as lively as any man of 45. With his death, the last link between the present day paper manufacturer of Holyoke and the men of early times like J. C. Parsons, William Whiting, the Newtons, and dozens of other worthies, has broken.

Mr. McElwain came of good country stock, being born in Middlefield, Mass., March 17, 1828, one of five sons of Jonathan and Lucy Smith McElwain of that town. He was of the fourth generation of James McElwain, who came to America from the north of Ireland in 1727.

He attended school at intervals as farming duties allowed and then attended Williston Seminary at Easthampton, following which he taught school for two years in West Springfield. He then became clerk in a Springfield agricultural store, later buying it out with his brother. He came to Holyoke at the request of J. C. Parsons to operate the Parsons Paper Company. Mr. Parsons had been interested in several ventures in paper making and the Holyoke mill was his most ambitious one.

His success was marked and immediate and exceeded Mr. Parsons's anticipations of his young secretary, that being his official position at first. The Parsons Paper Company was a money-maker from the first; it was the first of a long line of money-making paper plants in the city. Mr. McElwain had interests in several. There were no less than nineteen paper mills in Holyoke as early as 1873. A second mill was built two years later and in 1888 a new mill was built on Sargeant street, known as Parsons Paper Company No. 2. When the American Writing Paper Company was formed they sold the first mills but retained and operated independently the No. 2 mill, which they still operate.

In 1880, Mr. McElwain was one of those who organized and built the Nonotuck Paper Company and later bought the Syms and Dudley mill adjoining it, operating the two under the name of the Bonotuck Paper Company. This was in 1892; and the same year the Linden Paper Company was organized and another fine mill erected.

Mr. McElwain was also Treasurer and Manager of the Valley Paper Company for a number of years. These latter plants were taken over by the American Writing Paper Company, the latter part of 1899. His interests were not, however, confined to paper making. For years he successfully operated a stock farm on the West Springfield road, the "McElwain stock farm" having a fine reputation. He sold this the latter part of his life. He was also recognized in the financial field, being a director in the City National Bank, director of the Third National Bank of Springfield and trustee of the Mechanics Savings bank. For many years he was the sole survivor of the board of trustees of the Whiting Street fund, a fund left by Mr. Street for the support of the deserving poor of the Valley, which, under prudent and careful management had greatly increased in the years that followed Mr. Street's death.

He was a director in the Holyoke Public Library, was prominent in his earlier days in the affairs of the Second Congregational Church and was one of the founders of Grace Chapel, later to be a separate church at Cabot and Race streets.

He was a stanch Republican in politics and voted for Abraham Lincoln—and at the last election for Calvin Coolidge, a fact in which he took great pride. At the time of the 50th anniversary of Holyoke, he was accorded distinguished honors and attended most of the gatherings.

Mr. McElwain married in 1855 Miss Esther Marie Ely, youngest daughter of Homer and Anna Kelly Ely, of West Springfield. By this marriage he had one son, Henry Ely McElwain, who survives him, with a grandson McMillan McElwain. Mr. McElwain's first wife died in 1860 and in 1863 he married Miss Celia Ely, sister of his first wife.

The funeral was held Friday afternoon at the Skinner Memorial Chapel, the Rev. Dr. R. R. Wicks officiating. Burial was in the Ashleyville cemetery, West Springfield.

J. H. Delbridge

APPLETON, Wis., November 27, 1925.—J. H. Delbridge, 57, one of the best known paper manufacturers in northeastern Wisconsin, died suddenly at Green Bay, Wednesday, November 18. He became ill at about 3 o'clock in the afternoon and was taken to St. Vincent Hospital. After taking treatment he started out with Mrs. Delbridge for his home in Marinette, but a relapse of an attack of heart disease caused him to return. He died that same night in the hospital. He had been troubled with his heart for some time.

Mr. Delbridge was well known in this part of the Fox River Valley, as he was engaged in the paper making business in Kaukauna in 1888 until 1900 with N. H. Brokaw. He was at the time of his death, president and general manager of the Marinette and Menominee Paper Company, of Marinette, Wis., and the Falls Manufacturing Company, of Oconto Falls, Wis. Mr. Delbridge went from Kaukauna to Oconto Falls, where he took over the management of the Falls Manufacturing Company.

He was born in Albion, Mich., where he attended public schools and Albion College. Later he married Miss Esther Carrier, of Lansing, Mich., in 1893. He had lived in Marinette since 1920, when he went there to take over the management of the paper mill for the Continental Paper Company.

He was director of the Stephenson National Bank, of Marinette, of the Lumberman's Bank, of Menominee, of the Great Lakes Wall Paper Company, of Chicago, and the Victory Bag Paper Company, of Marinette.

Survivors are his widow, three daughters, Mrs. Agnes Hanson, Margery and Esther Delbridge, all of Marinette, a brother, J. B. Delbridge, Kaukauna; and a sister, Mrs. Maude Owen, Appleton.

At the funeral last Saturday, a procession of approximately 400 workmen from the mills of the Marinette and Menominee Paper Company marched to the decedent's home to pay tribute. The mills closed, not to reopen until Monday morning. Mr. Delbridge had been a friend of every man in his employ, and that friendship was returned. Members of the Marinette militia and members of the police force aided in carrying out the details of the funeral procession which was a large one. Among the marchers and those in automobiles were several hundred members of fraternal orders of which he had been a member.

Paper Men Tour Oregon

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., November 27, 1925.—W. D. McWaters, manager of the Portland division of the Zellerbach Paper Company, was among the crowd of forty leading business men who have been making auto trade trips to various sections of the state in the interest of jobbing and manufacturing. George G. Guild, president of the Columbia Paper Box Company, was also a member of this group making the trips.

Poor light puts production to sleep—*Good lighting wakes it up*

The well-lighted factory is the pace-maker in its field—and enjoys costs appreciably lower than do competitors. This has been proved by engineers and works managers in every branch of industry.

Yet four of every five plants are poorly lighted—have lighting that makes production costs excessive.

Good artificial lighting in your plant will give a 15% increase in production or its equivalent in lowered manufacturing costs.

To learn if your plant is properly lighted, get in touch with your local electric service company, electric league or club. Without any obligation to you, they will study your lighting needs and recommend improvements that will effect economies in your plant.

Remember: even 200 watt lamps in proper reflectors on ten foot centers give less than 1% of daylight.

INDUSTRIAL LIGHTING COMMITTEE
NATIONAL ELECTRIC LIGHT ASSOCIATION
29 WEST 39TH STREET
NEW YORK

New York Trade Jottings

The Stone Brothers Company, of 342 Madison avenue, New York, have recently acquired the services of Emanuel Salomon, who is now connected with the cotton rag division of the company.

* * *

Many prominent members of the paper industry are attending the National Exposition of Power and Mechanical Engineering at the Grand Central Palace this week.

* * *

The New York Traffic Club at its annual meeting last night elected William S. Cowie general traffic manager of the Seaman Paper Company, president for the coming year. He was inducted into office by W. A. Schumacher, general traffic manager of the United Fruit Company, retiring president, who was elected to the board of governors.

* * *

Detailed plans for a busy winter series of special meetings were announced at a recent luncheon of the New York Division of the Salesmen's Association of the American Paper Industry at the Hotel Belmont. Vice-President R. C. Tilden announced the appointment of a special committee on programs for the New York division, consisting of E. T. Simpson, of the Eastern Manufacturing Company as chairman, Endicott Rantoul, of the International Paper Company; E. G. Lloyd, of the Bulkley Dunton Company, and Edwin D. Peck, acting secretary of the association. At this meeting the retirement of Warren B. Bullock as secretary of the Association was announced, and the selection of Edwin D. Peck as acting secretary was also made known to the members. Mr. Peck is also chairman of the New York convention committee in charge of plans for the coming annual meeting. In discussing plans for the annual convention, Mr. Peck reported that the association has already succeeded in securing one notable speaker, and that other details are well under way, tending to make the coming convention by far the best in the history of the organization.

* * *

A unique theatre party enjoyed "Is Zat So" at the Forty-Sixth Street Theatre recently. The entire audience, numbering some fifteen hundred persons, were the guests of Herbert J. Grey, the well known dealer in paper and twine at 228 East Forty-fourth street, Mr. Grey, who celebrated his fifth business anniversary, outdid the theatrical stars in popularity and the fifteen hundred people gradually grew into a large family party. While the entire theatre has been frequently bought out by corporations, this is the first time an individual has done so. The staff of the H. J Grey Company, previous to the theatre party, enjoyed a banquet at the Cafe Boulevard, Forty-first street and Broadway, and Mr. Grey was presented with a stunning loving cup by the staff. The performance of "Is Zat So" was thoroughly enjoyed by everyone and the evening closed with an introduction of Mr. Grey by James Gleason, author and leading character of the performance, to the audience. Mr. Grey expressed his thanks and appreciation of the good will and co-operation enjoyed throughout the five years, and closed with a few very complimentary remarks commenting upon the efficiency and ability of the staff.

Hersee Co. To Double Paper Box Plant

LOS ANGELES, Cal., November 27, 1925.—Outgrowing its factory started two and one-half years ago which now has an annual production of 3,000,000 set-up paper boxes and employs seventy-five persons, the Hersee Company, paper box manufacturers, will immediately start constructing a new factory to double its capacity.

Provision is to be made for 250 employees and an annual production of 10,000,000 paper boxes. Such an output would require 200 box cars to transport the boxes.

The present factory is one of the outstanding industrial developments in Southern California. It was started by C. W. Hering and T. B. Seebalt and a deal has just been closed between the Hersee Company and the Advance Properties Company for an industrial site in the Goodyear Tract with trackage on which the first unit of the new plant is to be built.

The entire plant will have 32,000 square feet of floor space and besides manufacturing high-grade paper boxes will also print and emboss fine candy boxes.

Cameron Stuart of the A. D. Van Vranken Company represented both parties in the deal. The Austin Company will erect the building which, with the site, will involve the expenditure of $97,000.

Smith-Lewis Fibre Can Corp. Formed

WATERTOWN, N. Y., November 28, 1925.—The J. P. Lewis pulp and paper interests of Beaver Falls on the Smith-Lee Company interests of Syracuse have just organized and are to have equal domination of the Smith-Lewis Fibre Can Corporation, a newly formed million dollar company, which is to engage in the manufacture of cylinder, liquid tight, fibre containers.

Into the new company is merged the Beaverland Corporation, of Lowville, another Lewis company, which is engaged in the manufacture of board products. Its plant at Lowville will be used by the new company, thereby insuring an early manufacture of products.

Several hundreds of thousands of dollars' worth of special machinery have been ordered and will be installed at once so that the plant can be put in operation by the first of January. Power will be furnished by the new 10,000 horse power hydro-electric plant of the Beaver River Power Corporation.

Despite the high capitalization of the new company, the stock has all been subscribed by the Smith and Lewis interests and none will be offered on the market.

Harry S. Lewis, of Beaver Falls, head of the several J. P. Lewis pulp, paper and power enterprises established by his father, the late J. P. Lewis, will be one of the principal officers, stockholders and directors. He is president of the Beaver River Power Corporation, vice-president of the Northern New York Utilities, Inc., and a director of the Northern New York Trust Company.

Wilbert L. Smith, for many years president of the L. C. Smith & Bros. Typewriter Company of Syracuse, but now chairman of the board of directors of the Syracuse Trust Company, and Hurlbut W. Smith, for a long time vice-president and treasurer of the typewriter company, and president of the Smith-Lee Company of Oneida, N. Y., largest manufacturer of paper pulp disc bottle caps and similar products, will also be prominent officers and directors, as well as heavy stockholders in the new company.

Besides Mr. Lewis, W. L. Smith and H. W. Smith, Attorney Dickinson E. Griffith of Lowville, general manager of the Beaverland Corporation and a member of the Lewis corporations for the past several years, and Walter L. Chaplin of Syracuse will be directors of the Smith-Lewis Fibre Can Corporation.

The management of the company is to be vested in Mr. Griffith as representative of the Lewis interests and Mr. Chaplin as representative of the Smith interests.

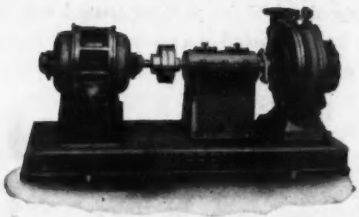
The plant is located close to its power and to its supply of raw material, and being close to the railroad with its own sidings has good shipping facilities.

Bogalusa Paper Co. Buys Ruths Accumulator

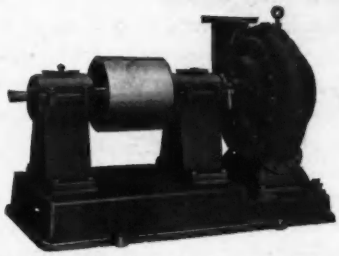
[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., December 2, 1925.—The Combustion Engineering Corporation, Ltd., has just received an order from the Bogalusa Paper Company, Inc., of Bogalusa, La., for one Ruths Accumulator of 6,500 cubic feet volume with 14 feet diameter and a length of 47 feet, built for 150 pounds working pressure. The capacity of the accumulator is 40,000 pounds of steam.

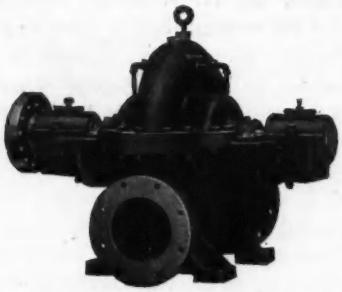
This is the seventh accumulator installation in the pulp and paper industry on this continent.



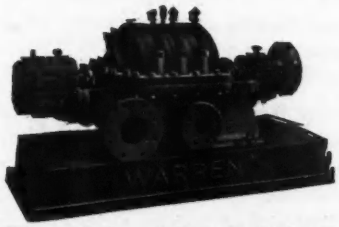
Warren Stuff Pump for handling pulped stocks of a consistency up to 5% and higher.



Warren Stuff Pump arranged for belt drive.



Warren Single-Stage, Double Suction Pump.



Warren Balanced Type Multi-Stage Pump for high pressure service.

What these pumps can do for you

UNDER present conditions of low prices and high costs, profits depend upon the degree of efficiency with which your mill is operated.

Probably the most important single factor influencing operating efficiency is the handling of the vast quantities of pulped stock and water that flow through the mill.

Warren Pumps are designed by men experienced in pulp and paper mill pumping problems with the sole object of attaining high efficiency plus absolute dependability. Quality of materials and workmanship are of a standard that carries out this purpose.

You can be certain that stock and water will be handled with the utmost efficiency at a cost per year that means maximum return on the equipment investment, when you install Warren Pumps.

If you need pumps that can do this let us send you Bulletins containing complete information.

Warren
Steam Pump Company
Warren, Mass.

Boston Chicago New York
Philadelphia St. Paul San Francisco

8591

WARREN

PAPER TRADE JOURNAL
ESTABLISHED 1872
With Which Is Combined
PAPER
The Magazine of the Paper Industry
HENRY J. BERGER, Editor

Member A. B. C. Audit Bureau of Circulations

Vol. LXXXI New York, December 3, 1925 No. 23

AGAINST GOVERNMENT INTRUSION

A rebellion by industry against the constant and growing intrusion of the government into the field of business activity is taking form. After watching bureaucracy extend itself amazingly during the post-war years in federal, state, county and city governments to the detriment of private initiative, leaders engaged in all types of business pursuits are now planning to offer stubborn resistance.

The first marker of the new movement is found in the arrangement of details for a mass meeting of industrial leaders to be held at Washington, December 10. The official call for this meeting is now in the hands of executives of three hundred trade associations and other industrial organizations.

The official call carries the names of the following members of the planning committee: Homer L. Ferguson, Newport News, Va. former president of the Chamber of Commerce of the United States and president, Newport News Ship Building Company; F. Highlands Burns, Baltimore, president, Maryland Casualty Company and president, International Association of Casualty and Surety Underwriters; J. E. Edgerton, Nashville, president of the National Association of Manufacturers and president, Lebanon Woolen Mills, and General R. C. Marshall, Jr., general manager, Associated General Contractors of America, who is chairman of the committee.

A preliminary meeting has already been held in Washington, with representatives of twenty-two leading trade associations present. The result of this meeting was appointment of the planning committee to issue the call for the December meeting and to suggest a program of action for the campaign.

The meeting, leaders of the movement now in Washington declare, will not be directed against governmental regulation of industry, but its full force will be thrown into opposition of the practice under which tax-paying business firms are forced to finance the government as an active competitor.

Preliminary study of the situation has definitely linked penetration of the government into business with desires by those in public office to perpetuate their tenure, magnify their functions or enlarge the field for political control and "spoils." These desires have been advanced in a manner so subtle as to cause Congress and the appropriating bodies of smaller units of government unwittingly to uphold the general practice.

The December meeting will be held in Washington two days after Congress convenes. Those who are anticipating the meeting's possibilities see a chance for the trend of conditions to be appreciated by the legistators. Most assuredly, say these observers, when once Congress comes to a realization of the manner in which the public funds are being expended in wasteful business activities, a change of affairs will be forthcoming.

The certainty of mind in this connection is bolstered by the fact that the platforms of both major political parties strongly contend that the government should be kept out of business. Stress is being laid upon the fact that the nation has developed under the individualistic theory of government, and not under the socialistic. To quote from a recent decision by the Supreme Court of South Dakota, "The constitution and laws of the United States and of the various states have been framed under a policy having primary regard for individual rights."

The number of individual industries that are mustering for the present attack on bureaucracy indicates the great variety of industrial enterprises into which the governmental units have thrust themselves. At the preliminary meeting held in Washington October 20, representatives of more than a score of major industries cited case after case to show the scope of this intrusion.

Now that the situation is crystalizing, it may be expected that conditions which individual minds have long known to exist will be forced into a position where a critical survey will be inevitable.

Among the charges which the meeting next month may be expected to develope for the attention of Congress, government officials and the public are the following:

1. Penetration of government bodies into business denotes almost invariably an effort by those in public office to perpetuate their tenure.

2. Lack of successful methods, efficient management and the driving force created by prospects of genuine industrial progress forces government production costs higher than those of private business organizations.

3. Government enterprises, usually launched under the pretext of saving money through elimination of private profit, almost invariably result in the wasting of public money, with the losses concealed by refusals to employ cost accounting systems that truly indicate expenses involved.

4. Extension of business activities in the realm of government is in exact accord with the dictates of the basic theories of communism.

PAPER MILL EMPLOYMENT IMPROVES

The improvement in the pulp and paper industry is reflected in the employment and wage figures for October that have just been issued by the Bureau of Labor Statistics of the Department of Commerce.

Reports were received by the Bureau from 207 paper and pulp plants, which reported their employment in September at 53,618 increasing in October to 54,853, an increase of 2.3 per cent. The payrolls in these plants also increased from $1,347,954 in September to $1,468,684 in October, an increase of 9 per cent.

One hundred and sixty paper box factories reported their employment in September at 17,592, increasing in October to 18,334, an increase of 4.1 per cent. The payrolls in these plants also increased from $367,615 in September to $399,002 in October, an increase of 8.5 per cent.

The Bureau also received reports from 201 paper and pulp plants which reported their employment in October of last year at 52,381, increasing in the same month of this year to 53,542, an increase of 2.2 per cent. The payrolls in these plants also increased from $1,387,304 in October of last year to $1,439,061 in the same month of this year, an increase of 3.7 per cent.

One hundred and fifty paper box factories reported their employment in October of last year at 17,037, increasing in the same month of this year to 17,458, an increase of 2.5 per cent. The payrolls in these plants also increased from $363,107 in October of last year to $380,028 in the same month of this year, an increase of 4.7 per cent.

Bids for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., December 2, 1925.—The Government Printing Office has received the following bids for 13,200 pounds white bond paper, 28 x 34—33, No. 13: R. P. Andrews Paper Company, 20.35 cents per pound; Aetna Paper Company, 17.68 cents; Dobler & Mudge, 19.97 cents; Barton, Duer & Kosh Paper Company, 17.95 cents; American Writing Paper Company, 19.25 cents; and Barton-Hobart Paper Company, 19.75 cents.

The Printing Office has received bids also for 3,150 pounds salmon bond paper, 24 x 38—31½, No. 13, as follows: R. P. Andrews Paper Company, 21 cents per pound; Aetna Paper Company, 14.68 cents; Dobler & Mudge, 17.25 cents, and Old Dominion Paper Company, 17.6 cents.

The Printing Office also has received bids for 12,000 pounds sulphite bond paper, 31½ x 36—40, No. 13, 4,000 pounds white and 8,000 pounds yellow: R. P. Andrews Paper Company, 7.8 cents per pound for white and 8.8 cents for yellow; Dobler & Mudge, 12 cents for white and 12 cents for yellow; Old Dominion Paper Company, 10.2 cents for white and 11.2 cents for yellow; American Writing Paper Company, 10 cents for white and 11 cents for yellow; Aetna Paper Company, 9.3 cents for white and 9.8 cents for yellow; Maurice O'Meara Company, 12.8 cents for white and 13.8 cents for yellow; and Reese & Reese, 10.49 cents for white and 11.09 cents for yellow.

The Government Printing Office will receive bids on December 4 for 12,900 pounds (300 reams) 21 x 32—43, 50 per cent white rag bond paper. Bids will be opened on the same date for 500 pounds (200 reams) of 24 x 36—10 manila tissue paper, and for 20,000 pounds (526 reams) of 19 x 24—38 white MF lithograph print paper. Bids will also be received on December 4 for 40 pounds of various sizes chip board.

Utilizing an Old Stunt

The Fort Wayne *Journal-Gazette*, of Fort Wayne, Indiana, is utilizing the old stunt in direct by mail advertising, of sending five-cent checks, "for the minute which it will take to read this message." A neat check, made out for the sum of five cents to the company or person to which the advertisement is sent, attracts the interest of the recipient immediately, and attached to the check, on the same bond paper is a slip which reads: "You are a busy man! Your time is worth money! We are willing to pay you five cents for the minute it will take you to read our message." Follows a brief summary of the advertising space which was used in that paper over a certain period, etc., advertising the advertising columns of the paper.

POWER SHOW NOTABLE SUCCESS

(*Continued from page 30*)

mum ventilation, non-clogging and rust resisting, ease of upkeep and repainting, permanent rigidity and long life.

B. G. Dann and K. H. Colville are receiving the many visitors to their exhibit and disseminating valuable information about their product.

Foote Bros. Gear & Machine Co.

IXL Speed Reducers are shown and demonstrated at the exhibit of the Foote Brothers Gear and Machine Company, of Chicago. IXL gear speed reducers are compact, self-contained units designed to step down the speeds of commercial motors, or other sources of driving power, to the speed required for any purpose. They are vastly superior to old methods of speed reduction by means of open gearing, chains, belts, etc., which occupy great space, are dangerous to life and limb, inefficient and high in upkeep cost.

IXL Spur Gear Reducers are fully enclosed, self oiling—dust proof—and fool proof. They are quiet in operation and require no adjustments, occupy little space and require practically no attention. Especially desirable where space is limited and in mills, etc., where dust, dirt and grit quickly deteriorates belting, pulleys, chains and open gears.

J. R. Shays, Jr., manager of the New York office, and W. G. Kerr, of the Pittsburgh office, are in charge of the exhibit. W. C. Davies, president of the company will also be in attendance at times during the week.

Buffalo Forge Co

Buffalo Armor-Plate Universal Iron Workers are shown at the booth of the Buffalo Forge Company, of Buffalo, N. Y. These machines have a large capacity and wide range of usefulness and have many exclusive features which make them useful even beyond the most extraordinary standards.

Buffalo Boiler Feed Pumps are exhibited at this booth and their advantages ably demonstrated. Buffalo Breezo-Fin Heaters are also prominently featured. This heater delivers warm air at an astonishing rate and is economical.

Robert Pryor and W. A. Wagner, of the New York office, are in charge and are being kept busy answering inquiries of interested visitors.

California-Oregon Paper Mills Build Warehouse

LOS ANGELES, Cal., November 27, 1925.—Completion of a $70,000 warehouse, providing an additional 16,000 square feet of working space, on property at the corner of Fifty-seventh and Alameda streets, was announced yesterday by L. L. Leadbetter, general manager of the California-Oregon Paper Mills.

The additional space was necessitated, Mr. Leadbetter said, by the rapid growth of the concern since it first entered this territory eight years ago.

The same concern recently completed the installation of a $120,000 printing plant at its factory.

Two plants are operated by the company, the Los Angeles factory and a northern pulp mill. The pulp from the latter is shipped to the local plant, where it is manufactured into paper of all kinds. More than 200 men are employed at the plant, which supports a monthly payroll of $30,000.

Beveridge Paper Co. Sends Out New Samples

INDIANAPOLIS, Ind., December 1, 1925.—The Beveridge Paper Company is sending to the trade printed samples of its complete satin finish line in white and nine colors. The samples show possibilities of satin finish bristol for halftone work, embossed and folded against the grain, and in addition they suggest the use of satin finish for tickets, door checks, mailing cards and out of the ordinary advertising pieces.

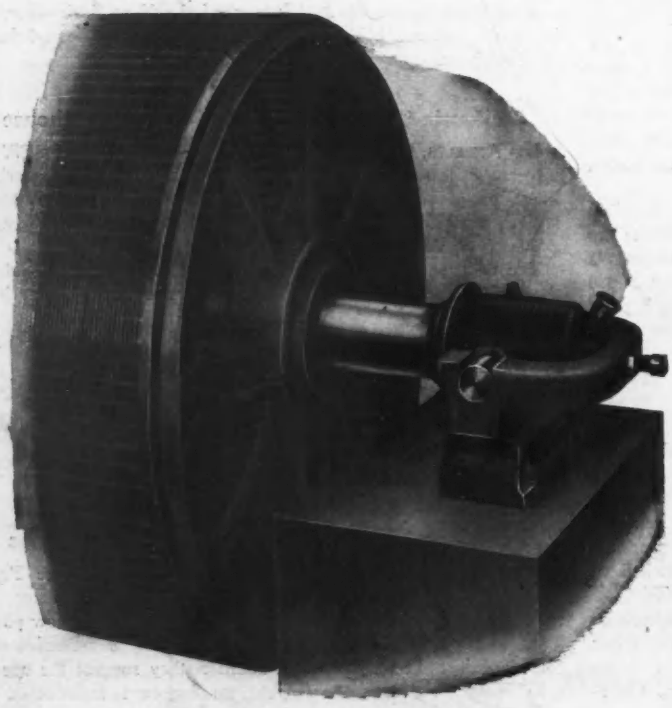
Soda Ash **Bicarbonate of Soda** **Caustic Soda**
Modified Soda **Special Alkali**

ALKALI

QUALITY

The additional value in Diamond Alkalies that maintains them as the Standard.

DIAMOND ALKALI COMPANY
PITTSBURGH, PA.



Just what you are looking for. Anti-friction cylinder mold bearing that was never known to give any trouble.

Precision built Cylinder Molds to meet exacting demands.

Keep your product up to quality and capacity by using our Paper Machines and equipment.

The Black-Clawson Co.
HAMILTON, OHIO

Section of the
Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W.G. MacNAUGHTON, Secretary

The Relation Between Cooking Conditions and Yield and Quality of Sulphite Wood-Pulp

By R. N. Miller, Chemist in U. S. Forest Products Laboratory, Madison, Wis., Vice Chairman Sulphite Pulp Committee, Technical Association of the Pulp and Paper Industry

Under the above title it is the intention to discuss some of the properties of materials used in the sulphite process and some of the principles and facts of science that can be applied to explain the reaction in that process and their effect on the yield and quality of pulp.

In using the word "explain" I recall the shock I received when, after four years of study of chemistry and allied sciences, it was pointed out that science does not explain anything; that it only describes an event or phenomenon in greater detail, and applies certain laws to a measurement of the phenomenon. If a man falls off the roof of the chip bins, the explanation may be a nagging wife at home—all science can do to explain his fall is to apply the law of gravitation and calculate how fast he was going when he landed. So, then, in "explaining" the sulphite process the materials employed can only be described in greater detail and certain laws applied to the measurement of the phenomena.

Materials Used

Taking first the cooking liquor, it may be described as a solution in water of sulphurous acid and a bisulphite of an alkali or alkaline earth metal. The liquor most commonly used is a solution of sulphurous acid and calcium bisulphite. Ordinary usage in the mill makes a different division of the main constituent of the cooking liquor from that as a result of the analytical methods, and speaks as if the liquor consisted of a solution of sulphurous acid and calcium monosulphite. The distinction is of no importance to the man handling the relief valve, but is of interest in the more detailed description which is proposed.

Calcium bisulphite is peculiar in that without the presence of an excess of sulphurous acid it will not dissolve in water, and, furthermore, as soon as the excess becomes too small it will precipitate; not only so, but at only moderately high temperatures it will decompose if the amount of excess sulphurous acid is small and produce the still less soluble calcium monosulphite.

In the sulphurous acid we have what might be called a versatile substance. Some substances are not versatile, inasmuch as they do few things well. The gas called helium can hardly pay its way, as about the only thing it can do is to float dirigible ballons more or less successfully. Sulphurous acid, however, can react in at least two distinct ways. It is in the first place an acid and exhibits all the distinctly acid characteristics in some degree: It is sour, it dissolves some metals it inverts cane sugar, etc., etc.

Second, it is capable of adding itself to certain organic materials. The chemist pictures this process in a definite way that is like representing the sulphurous acid with an arm that can reach out and cling to other materials that have the right of a handhold. When it has done this it may be said to retain its acid properties, but its reducing capacity has largely disappeared. It may cling tightly or loosely, as far as we know, suiting its own fancy, but it is consistent in that it always clings tightly or loosely to the same things.

Considering next the wood to be cooked, we find that chemically all wood is very much alike as regards the principle components. Differences that may be very evident in appearance, smell, taste, etc., are often the result of the presence of relatively small amounts of materials which may be neglected until, in particular instances, their presence is found to have an essential influence on the cooking process applied to a particular wood.

When speaking of wood in the chemical sense we conceive of a material that we can separate into various parts but which, considered either in those parts or as a whole, is still somewhat a mystery. We can separate the wood into parts by suitable treatment with concentrated sulphuric acid. One of the parts we call lignin, although we know that it is not exactly the same as the lignin in the original wood. By applying a treatment of chlorine gas followed by washing with sodium sulphite we can obtain a material which is called cellulose, although we know that it is different from the cellulose contained in cotton. Again, if we treat the wood under suitable conditions with weak acids we can remove a quantity of material which is found to be a mixture of sugars. After this treatment the application of the chlorine treatment gives a material very much more like cotton cellulose. So we can consider the wood to be made up roughly of a material called lignin, a material very much like cotton cellulose, and a quantity of material chemically known as sugar.

If we examine the wood under the microscope, differences between different species more obvious than the chemical differences can be seen. We find that the wood is a more or less porous material, that it is made up of cells arranged lengthwise, and that the spaces between the cells are more or less filled up with matter. If we carry out chemical reactions, like those described, on specimens of wood under the microscope, we find

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that a large part of the material that we call lignin is the material between the cells and that the cell proper, which is the fiber, is composed largely of cellulose. Where the sugar bodies are disposed has not been revealed as yet. Some evidence indicates an association with the lignin, some an association with the cellulose.

Summarizing the description of wood thus far, we have a more or less porous substance composed of three materials or groups of material which we propose, in the sulphite process, to separate so that a valuable fibrous material known, for want of a better word, as sulphite pulp can be obtained by the action of a chemical solution which can attack the wood in at least two distinct ways.

It is, of course, known that bark, knots, etc., will not cook to a satisfactory product in sulphite liquor; hence the first step in preparing the wood is to remove all such material. It is almost axiomatic in chemical manipulation that the more intimately you can mix the materials the quicker the reaction will go. In this day of speed the wood is chipped to bring the wood and chemical into more intimate contact and hasten the reaction. There was a time when chipping was not the practice. Some of you can perhaps remember the Interlake mill at Appleton in the '90s. Then they charged the digester with blocks of wood an inch thick, carefully piled.

It was stated in describing wood that it is more or less porous. You will now please recall that in your experience chips for sulphite pulp are usually cut from ⅝ to ¾ inch along the grain. The reason is that experience has shown that to secure even penetration of the wood the chips must not be longer than that, except in special cases.

Acid Penetration of the Wood

The first question we will take up and explain by description is that of how the acid penetrates the wood and what influence that has on yield and quality of pulp. It seems to be a much more difficult trick to keep liquids out of wood than to get them in, but in the case of chip penetration our trick is to get the sulphite liquor in.

If you take a one-inch cube of wood and heat it in sulphite liquor at such a rate that the temperature reaches 100° C. in about an hour, an interesting observation can be made. To examine it, cut it into slabs with the grain. You will see an irregular brown square with a light border in the center of each slab. Now put several drops of methyl orange on the cut surface and let it dry. The square in the center that was brown will be reddish-brown and the border will be yellowish-orange. Methyl orange is an indicator that is red in acid, yellowish-orange in neutral, and light yellow in alkaline conditions. In the presence of the bisulphites it is yellowish-orange. In other words, they are neutral to it. The test shows that the center of the block is acid and the outer rim is neutral. The acid part of the cooking liquor has penetrated faster than the bisulphite.

If we go back to the beginning of history in the sulphite process we find it recorded that Tilghman first cooked with sulphurous acid. He could not produce anything but brown pulp, however, until he put some lime in the cooking acid. He attributed the failure to the presence of sulphuric acid, and ever since that time one technologist after another has attributed all the ills of the sulphite process to sulphuric acid.

Tilghman, however, did not overlook anything in his patents. He patented the use of sulphurous acid and bisulphites, and so kept most other inventors out of the field. Recently Cross and Englestadt have operated a sulphite process in Norway in which sulphurous acid alone is the cooking chemical. In the work of Klason we find record of the fact that mineral acid will so alter the lignin in wood that it will cook only slowly if at all with bisulphite cooking liquor. In the work at the Forest Products Laboratory we have verified his findings and have found also that sulphurous acid alone at temperatures above 110° C. will alter the lignin so that it will not dissolve. We find that it turns brown and will not cook. Below that temperature it will cook, and that is the reason why Cross and Englestadt operate below 110° C. and cook for about 24 hours.

Going back to the block with the brown acid reacting center, we can describe in greater detail what has happened. The acid part of the cooking chemical has penetrated faster than the bisulphite and by reaching 110° C. before the bisulphite caught up it has spoiled the center of the block so that it will not cook.

A further interesting point has been developed by measurement of the penetration of the wood by the cooking chemical. It has been found that the stronger the sulphurous acid in the solution, the faster the bisulphite will penetrate. The acid seems to help the bisulphite to get in.

All of you sulphite men see the application of this information every day. Every time you watch the tailings go off your screens you see chips that are spoiled because they were not penetrated by the bisulphite part of the cooking liquor until their temperature had reached or passed 110° C. In the old days some of you used to see "punched" or "bored" cooks," and I know the old timers used to say that the steam blew up the center of the digester. From what I have said some of you may agree with me now that a "punched" or "bored" cook is nothing but one that is steamed too fast and which gets about 110° C. before the chips are all penetrated by the bisulphite. If you do not agree with me you will at least admit that the slower you bring your digester to pressure the less likely you are to have a "punched" cook.

Now the question is how long must be allowed to give the time necessary for penetration? The answer is that one and one-half hours will be enough to penetrate dry chips up to ¾ of an inch long. For wet chips two hours are needed.

There remains one question to be covered in the matter of penetration. Why, if a digester is brought to pressure in two hours, do you have any screenings at all except for knots? Well, you must remember that most sulphite digesters are at least forty feet high, and that your instruments for measuring temperature are not more than one-third of the way down the side. When the thermometer reads between 100° and 110° C. and the digester has come up to pressure in one and one-half hours, the bottom, twenty-five or thirty feet below the instrument, has been at that temperature for a considerable time. The bottom of the digester may, in fact, reach 110° C. in so short a time as half an hour, and the inevitable result is screenings.

It has been stated that the strong acid hastens the penetration of the bisulphite. That is why you get fewer screenings with strong acid.

To sum up, then, the first step in making better pulp of higher yield is to steam slowly and use as strong an acid as possible.

It has taken quite a while to get our digester up to pressure, and in doing it we have spoiled some of the chips beyond recall. The consideration of the process now divides itself into two parts, the physical and the chemical. We will consider the physical side first.

Physical Aspects of Cooking

In the physical aspect we have to consider the transfer of heat in fluids and the equilibrium conditions between gases and liquids. I have never been inside a digester when it was cooking but from observation of the action of liquids when heated in glass I can guess at how the heating of the digester proceeds.

You are all, no doubt, familiar with the circulation that occurs when water is heated in any container. I believe the same thing happens in a digester except that the movement of hot and cold currents is less violent than when water is heated in an open vessel. I can not conceive of a movement of the digester contents as a whole. There is no churning around of the entire contents of the digester—you can not shake up the digester, by a sudden opening of the steam valve. Some of you may not immediately agree with me, but consider a minute. How would you "stir up"

a digester loaded with 20 tons of chips? You know how chips pack together. Until the temperature reaches 120° C. the chips are hardly softened at all. After they are softened they are still in chip form; those of you who have seen a Mitscherlich digester opened realize this. Any of you who have had an accident that made necessary the opening of a quick-cook digester also know it is true. But supposing, for the sake of the argument, that the chips were all "mushed up" in the liquor, you would still have stock at about 12 per cent density. I can not picture stock at 12 per cent density churning around in a digester while cooking. We can conclude this picture of the digester contents during heating by saying that what we have is a stationary or slowly settling mass of chips with currents of warmer or colder cooking liquor rising or falling among them in highly irregular and contorted paths because of the dispersing action of the chips.

Next we can consider the effect of heat on the cooking solution. The most important view of it is that which takes into account the laws of equilibrium between a gas and a solution of the gas in a closed vessel. For the purpose of our discussion it is sufficient to say that the more you heat a solution of a gas, the greater the desire of the gas to get out of the solution. Why do you relieve the digester? Well primarily to keep it from blowing up, and secondarily to promote the rise and fall of those currents of liquor that carry the heat. In a boiling open vessel of water the rising steam helps to move the liquid around. In the digester the gas and steam rising also help. There is a definite relation between the temperature and pressure within the digester and the amount of gas in the acid. In a properly arranged system this relation can be expressed mathematically. In a commercial digester we can only say that it approaches the ideal more or less closely, and that for every combination of temperature and pressure there can be only one concentration of gas, or, in other words, of sulphurous acid, in the solution. Just what does that mean? It means that if you start with a 10 per cent and a 7 per cent and a 5 per cent acid with, say, 1.20 per cent combined and heat them separately at 75 pounds pressure, by the time you have reached the corresponding boiling temperature they will all be of approximately the same strength. In other words, the temperature and pressure relations determine what concentration of sulphurous acid you can have—absolutely in an ideal system, approximately in a commercial digester.

Chemical Aspects of Cooking

In taking up the chemical side of the cooking operation let me remind you again that the most active part of the cooking chemical can react in at least two distinct ways, and that the wood is composed of three main parts of compounds. The sulphite process is concerned with the removal of some of these and the preservation of others.

The removal of the lignin is the first consideration. I will not attempt to go into the detailed description of the chemistry of lignin. Before I could get beyond the entry I would be confronted by the fact that chemists do not really know what lignin is. The old theories of Klason concerning lignin removal are as good as have been presented and are to the effect that lignin dissolves by reason of the formation of a lignin sulphonic acid whose salts are soluble in water.

We do know, however, how fast lignin can be removed and how temperature and acid concentration affect the rate. Below 110° C. the rate of removal is very slow, as evidenced by the fact that in his recent work in Norway Mr. Cross cooked for about 24 hours with a sulphurous acid solution about 7 per cent sulphur dioxide at a temperature between 100° and 110° C. As we increase the temperature the rate of lignin removal doubles for each 10° rise. That is, if it takes 24 hours to cook at 110° C., it will take 12 hours at 120° C., 6 at 130° C., 3 at 140° C., and one and one-half at 150° C. This relation holds approximately for all moderate concentrations.

There is a slight tendency for the rate to increase as the concentration of sulphurous acid goes up, but to increase the rate of cooking on this basis is not so easy. At any temperature the acid strength must be changed from 1 per cent to 3 per cent sulphur dioxide as sulphurous acid, before the rate can be doubled; that is, if a 1 per cent acid will cook the pulp in 24 hours at 120° C., a 3 per cent acid will be required to cook it in 10 hours.

Considering the removal of the sugars next, we can state that some of them are removed very easily. Before the cook is half finished the major part of the sugar is removed. The remainder comes away more reluctantly, so that all sulphite pulps contain some small quantity of material that falls under a rough classification of sugars.

Yield of Pulp

Now, having removed most of the lignin and most of the sugars, what we have left is pulp, and we blow the digester. Let us see what it is and how much there is of it. If we start with spruce wood containing 58 per cent cellulose, 30 per cent lignin, and 12 per cent of the materials we called sugars, we have left at the end of the cook, basing our figures on the original wood oven-dry, 48 per cent cellulose, 1.5 per cent lignin, and 1 per cent sugars, a total yield of 50.5 per cent of the dry weight of the wood; or 56.1 per cent of air-dry pulp. These figures are from experimental cooks. They have been equaled in commercial operation for periods of months, and can be taken as the ideal to be striven for in commercial operation. Most of you who operate sulphite mills do not come within 10 per cent of that figure, so let us look into some of the reasons why.

At the start of the cook the first thing done is to make from 1 to 5 per cent of screenings in steaming the digester. This has already been discussed. One per cent is not bad, but five per cent or more is sometimes made.

The most serious loss in yeild, however, is doubly so because it can go on without any proof that it does occur. In speaking of the sulphite process the most concise and general statement is that the cooking liquor dissolves the encrusting material and leaves the fiber. This broad generalization implies that the fiber is inert—that the acid does not attack it. Such an implication is far from the truth. The fiber is not inert, and the acid does attack it.

Going back for a moment, it was stated that sulphurous acid could react in at least two ways—as an acid, and as an addition compound. We do not know the whole story of the action of sulphurous acid on wood, but we are safe in saying that its tendency to add on to some other substances is largely responsible for the lignin removal. The other reaction, the one in which we are interested, is a result of the purely acid characteristic of sulphurous acid. It breaks down sugars of the complex kind into simpler ones. This reaction is the one responsible for the sugar removal already spoken of, and it is also the one responsible for the loss in yield under discussion. Cellulose, the main constituent of the pulp, is closely allied to sugars. By suitable treatment with acids it can be completely decomposed into sugars. The fact that cellulose or pulp can be produced at all by the sulphite process is not due to the complete inertness of the cellulose but to a difference in rate of reaction, and most of the papermaking qualities of pulp from any species of wood can be traced to the effect of the rate of reaction or of the conditions of the reacting upon the various components of the wood. The conditions principally involved in the variations of yield and quality are, first, temperature; second, acid concentration. For convenience, however, we will consider the acidity phase of it first.

Effect of Acidity

Acidity in the sulphite liquor comes mostly from the sulphurous acid at first. As the cook proceeds the effect of relief is to reduce the concentration of the sulphurous acid, but at the same time the reaction with the wood produces a stronger acid of an organic character, so that the acidity of the liquor actually increases while

the concentration of sulphurous acid is going down. Thus as the cook progresses conditions become more and more unfavorable for the cellulose.

From both experimental work and commercial experience we know that if we increase the concentration of sulphurous acid we can hasten the removal of lignin to some extent. The same conditions also hasten the removal of sugars, but unfortunately such gain as we can make in the removal of lignin and sugars by increasing concentration of sulphurous acid does not produce a corresponding detrimental effect on the cellulose. On the other hand, it is unfortunate that this small gain in lignin and sugar removal can only be experienced at low temperature. You can not keep the advantage of high concentration of sulphurous acid because pressure limitations prevent your keeping it in the digester. You have to relieve. To sum up, such gains in lignin removal as can be made by the increase in sulphurous acid strength in the cooking liquor are small because of the pressure limitations, but that gain can be made without loss of cellulose.

Effect of Temperature

Turning now to temperature, it can be said that it is the most important single factor in the whole sulphite process. Temperature conditions that increase the rate of lignin removal increase to a greater degree the unfavorable changes in the cellulose.

I have frequently spoken of rate of lignin removal, rate of sugar removal, etc. It is hard to describe a chemical reaction in any detail without going into the matter of rate. Whenever one begins to measure chemical phenomena the rate at which it goes becomes of immediate importance, and in the industrial application of chemical reactions the rate of reaction is constantly given attention. Sulphurous acid will probably dissolve lignin at ordinary temperatures, but that is of little importance. It has no commercial significance except, perhaps, in the life of acid tanks. But when we begin to study the rate of reaction in the sulphite process, we find that at any temperature there is a definite rate of reaction, faster the higher the temperature. The time it takes to make a cook is a pretty definite thing at any one temperatrue, and it is just as definite (but more difficult to determine) over any range of temperature.

Careful laboratory experiments have given some information about the relation of temperature to yield and quality that agrees both with chemical studies of wood and with the results of commercial practice. The conclusions can be stated as a rule that the lowest *possible temperature will produce the best yield of pulp for the same lignin removal.*

Disregarding these cooks that are too short to produce a commercial pulp, we may first consider cooks which require four hours to go from 110 to 160° C. Such cooks will produce a pulp that is screenable and a commodity of some value. Next, with cooks that require 6 hours to rise from 110 to 155° C., we get into the range of ordinary commercial pulps such as are of news-grade quality. In such cooks there would seem to be little of variation in cooking procedure, but in such cooks the small variation can produce a great difference in yield and quality.

It has been found both by experiment and practice that a rise at uniform rate from 110 to 150° C. over a period of 6 hours will produce a strong pulp of good yield. If anything but a uniform rise is followed it must be either a fast rise at first followed by a slower rise—holding of the digester at high temperature—or a very slow start followed by a rapid rise and a quick blow. The first alternative will produce a raw pulp of low yield if blown light, or a weak, soft, easy bleaching pulp if blown dark. The second alternative will produce a raw pulp that will give a paper with high pop test, hard, and with a brittle tendency. Cooks made in the second way are easy to burn and will spoil in a few minutes. Cooks of the first type may appear raw and yet have lost 10 per cent in yield. Those of the second type will be both raw and high yielding. The question is, why is this difference? In speaking of rate of lignin removal it was stated that it was directly dependent upon the temperature and further that cellulose was destroyed at a rate that increased faster with rise in emperature than the lignin removal. You remember also that it was stated that the acidity of the cooking liquor increased at the end of the cook and that it was the acid character or the liquid that destroyed the cellulose. Don't you see what happens in a cook that is brought up too fast? The lignin does not have time to get into solution so the pulp is raw. The high temperature and high acidity destroy the cellulose at an undesirable rate. The result is a raw pulp of low yield. At the other extreme, the cook that is brought up too slowly, neither the lignin is removed in time nor does the cellulose stay in contact with the liquor at high temperature long enough to suffer much. The pulp just isn't cooked. What must be done then in a system where time is limited is to hit the medium course which will permit the least destruction of cellulose with the greatest lignin removal. In cooks of about 8 hours duration you can not expect to get the quality of pulp that you could get by the slow Mitscherlich process. You can approach pretty close to it in cooks of 10 to 12 hours but even here you may not make the ideal yield.

In the Mitscherlich process you have the most favorable conditions for the production of a high yield of fine pulp. In this process the time for penetration is ample to secure thorough penetration, the length of cook is enough to secure the removal of lignin at temperatures that do not favor the rapid change in the cellulose that causes loss in yield and loss of strength.

There seems to be a temperature above which the rate of change in the cellulose is all out of proportion to the lignin removal. This temperature is about 140° C. For this reason too long exposure to temperatures above 140° C. in an even slightly acid solution will be certain to cause an undesirable change in the cellulose.

There is one other factor that may have a decided influence on yield and quality. It is that part of the acid which we speak of as combined. I have often been asked what is the best combined to carry. The only answer is enough. Enough for what? Enough so that at no time in the cook is there an instant when there is not some bisulphite present in the liquor. Practically the absence of bisulphite can happen only near the end of the cook, but when it does occur it results in an immediate and serious loss in yield and a decided weakening of the pulp. If that lack of bisulphite occurs before the pulp is fairly pure as regards lignin you have a burned cook. By fairly pure, I mean a lignin content below 3 per cent. You can not burn a cook that has reached the stage where the lignin in the pulp is below 3 per cent but you can reduce the yield 10 per cent in less than half an hour, and all such reductions in yield are accompanied by a loss in strength. Much easy-bleaching pulp is made in just this way.

The explanation of the loss of strength and yield goes right back to what was said about acidity and temperature. It was stated that the acidity of the liquor increases toward the end of the cook even in the presence of bisulphite or in other words combined. When there is no more combined the acidity increases still more and the yield decreases very fast. It does so because the acid bodies keep right on forming as long as there is any lignin and sulphurous acid and at high temperatures these acid bodies make short work of the cellulose.

There is frequently an increase in sulphuric acid in the liquor under such conditions but I doubt very much if that alone is what does the damage. Sulphuric acid is nearly aways present even in cooks producing the best pulp. I say nearly always because out of hundreds of cooking liquors that I have examined I found just one that did not contain sulphates I don't know the history of that sample. It was sent to me. I wish I had never seen it because now I have to use the words "nearly always," and I do not want to. While on the point I might say that sulphates or sulphuric acid in the amounts that can be present in commercial practice do not worry me much. I have made good pulp of high yield in cooks in which I added sulphuric acid and sulphates to the cooking liquor.

You may be asking how am I to tell when the combined is

gone or nearly so. Chemically it is a matter requiring considerable care. Practically, however, it is very simple. The color of the liquor is a rough but true guide to quantity of combined left in the acid. If a sample is drawn through a condenser and compared with a standard color you have the simplest and beast measure of the point at which the cook must be ended.

Do not, however, misunderstand me. The color of the liquor tells you absolutely nothing about the quality of pulp that you are about to blow unless the cook has been correctly combined. First your acid must contain combined enough for your purpose and second the temperature must be raised at the correct rate to secure removal of the lignin. If these two factors are taken care of you will be as near to securing the grade of pulp you want as you are ever likely to get within the time limit of your mill, and the color of the liquor is the best guide as to when to blow the digester.

Earlier in the talk I said that about 56 per cent of air-dry pulp was the ideal for which you should strive. How many of you are getting that much? How many of you are coming anywhere near it? How many of you have any idea of what your yield is in terms of per cent by weight of the wood cooked? Not many. I know of only three mills in the United States who know what their yield is in terms of per cent by weight of the wood cooked. From information that comes to me about cooking methods, I will wager that more of you are gettng 45 per cent than 50 per cent. It is only within recent years that the chemistry of wood and of the sulphite process was well enough investigated to make it possible to set up an ideal and to figure in dollars and cents what it meant to fall short of that ideal. Cost accountants have made the book records of wood bought and pulp made come out so that the cost of wood per ton could be figured, and I know how it is done. Any of you who have seen inventory figures taken know also.

What I would like to see installed in every sulphite mill is some method for weighing chips. As soon as you men could show your managers that 10 per cent more pulp could be obtained from the same quantity of wood it wouldn't take them long to take the necessary steps to provide you the means.

Now I have used a lot of words and have probably concealed my meaning in a way that would have pleased the French cynic who said that words are given us to conceal our thoughts. But I shall try to sum it all up in a few plain rules. I might say, first, cook *all* your wood. Make as few screenings as possible by using the strongest acid you can make and bring them up to pressure as slowly as possible. Second, watch your temperature carefully—make your digesters move steadily and use the lowest temperature you can especially during the early part of the cook, and still get well-cooked pulp. Third, use enough combined so that there is never an instant when there is not some available bisulphite in your liquor. When you have done these three thngs you will have applied all the essential knowledge that any scientist can give you at this time about sulphite cooking.

The Nature of Cellulose From Cereal Straw

This is the title of a book that has just appeared in Germany, written by Dr. Alfons H. Haug and published by the Verlag von Carl Hofmann, G.m.b.H., the publishers of *Zellstoff und Papier* and *Der Papier Zeitung*.

The book takes up in considerable detail all the problems that surround the character of the cellulose or pulp obtained from the treatment of various cereal or grain straws. It discusses the problems involved from the special standpoint of the furoids. After a short introduction in which the general importance of the problem is shown and various general properties of wheat, rye and other cereal straws are described, the author makes a careful study of the literature that has been published on the general subject of the furoids. By furoids are meant those constituents of the straw which will give furol derivatives, such as furfurol, on decomposition. In this part of the book considerable details are given of the properties of the straw cellulose from this standpoint and on the properties of the furoids which go into solution.

It may be mentioned that the important properties of the furoids are, one, decompose when brought into contact with acids to give considerable gurgurol; two, they react irregularly with phloroglucin hydrochloride in comparison with pentoses and pentosans; three, they yield acetic acid and carbon dioxide on oxidation; four, they possess great possibilities of reduction; five, they are very sensitive towards acid hydrolysis; six, they form an osazone with phenylhydrazine (xylosazine); seven, they are very resistant to alkaline hydrolysis; eight, they are partially fermentable; nine, the content of furoids in the straw cellulose is the cause of the formation of molds.

One section of the book is devoted to the isolation of cellulose from wheat straw and the determination of the cellulose content according to the chlorination process. Twelve different determinations were made on samples of chopped up straw to establish the cellulose content after the straw had first been treated with a two percent solution of sodium sulphite.

Another section treats of the reactions which take place between chlorine and the non-cellulose ingredients of the straw. The action of chlorine on xylan is discussed. Still another chapter is devoted to the study of the methods employed in establishing the purity of the cellulose preparations which are separated from straw. Five determinations of the furfurol content of the distillates were made and a detailed discussion is given of the results obtained and of their importance.

Then the question of the reducing capacity of the straw cellulose is taken up, then the conversion of xylan and oxycellulose cellulose into oxycellulose, then the various reactions of straw cellulose. Further topics in the book are the extraction of straw with the aid of caustic soda lye and the determination of the extracted xylan. Xylan was also extracted from unbleached straw cellulose as well as bleached cellulose.

An entire section is devoted to the experiments made on the separation of the furoids or the residual furfurol splitting substances from cellulose by hydrolysis.

In conclusion it is stated that the chlorination process was used to determine the cellulose in wheat straw and it gave good results when in place of the sodium sulphate solution a one percent solution of caustic soda was employed, for washing out the reaction product. A yield of approximately 54 per cent of lignin-free and ash-free cellulose was obtained. It was found that the chlorination process took place in the same manner in this case as when used in pine wood. Considerable quantities of hydrochloric acid were obtained as reaction by-product and only this acid, no organic acids being produced. At the beginning of the process the production of hydrochloric acid is a maximum, then it decreases considerably and finally it decreases in a gradual manner. A part of this acid is due to the action of the chlorine on the xylan in the straw. Here again no organic acids were formed.

Austrian Mill Production for September

WASHINGTON, D. C., December 2, 1925.—A cable from Assistant Trade Commissioner Baldwin, Vienna, states that 16,900 metric tons (metric ton = 2,205 pounds) of paper and 15,500 tons of chemical pulp were produced in Austrian mills during the month of September. This brings the total production for the first nine months of 1925 up to 140,700 tons of paper and 131,600 tons of pulp, or 74 per cent and 108 per cent respectively of the annual capacity in prewar years.

Saving Fuel by Preheating Air for Furnace

Important savings in fuel can be made in power plants of industrial establishments by heating the air supplied to the furnaces, Joseph G. Worker, Assistant to the President of the American Engineering Company, of Philadelphia, told the Association of Iron and Steel Electrical Engineers at its recent convention in Philadelphia.

While rapid strides have been made recently in the application of preheated air to increase the efficiency of large central stations in the electrical industry, Mr. Worker emphasized the fact that it is not necessary to apply the principle in this elaborate way nor to go to any great expense in order to obtain definite economies

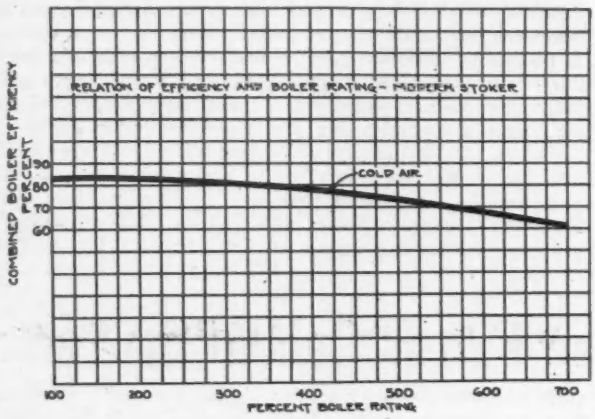

FIG. 1

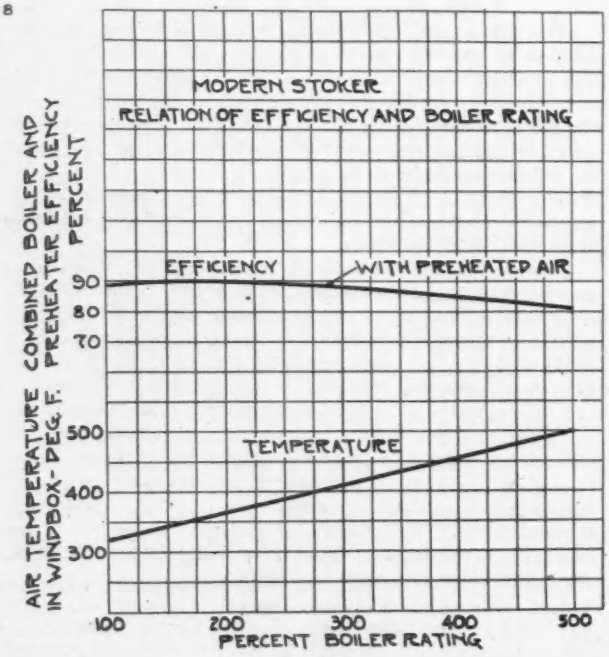

FIG. 2

The above two sets of curves show graphically how preheating of the air supplied to the furnace increases the combined boiler-furnace efficiency at various boiler ratings.

from the preheating of the combustion air for the furnaces of the ordinary mill or factory.

Fuel economy results not only from the absorption by the incoming air of heat that otherwise would be carried up the stack, but also from the better combustion of the coal when the stokers are supplied with preheated air.

"There is a certain amount of waste heat from the flue gases that can be obtained at low cost," Mr. Worker said. "If we attempted to preheat the air for combustion purposes say 100° F. this preheat could be obtained without much additional expense for handling the hotter gases, and the cost for preheated air equipment would be small. The first 100° F. of preheated air is, without question, the most effective.

"Care must be taken in the consideration of each individual situation to determine whether or not high preheated air will pay for itself. Some engineers are of the opinion that you should obtain as high a temperature of the gases to be used for combustion as possible. The point that it is desired to emphasize here, however, is that even though a particular situation might not warrant very high heating of the combustion air, it does not follow that low temperature preheating will not pay and be very effective for combustion purposes. A large number of boiler plants in the United States are already using effectively low preheated air, and considering the small cost to obtain this, they no doubt are showing overall results that warrant the installations."

Mr. Worker described the three main types of preheaters that have been developed—the plate type, tubular type and the rotary gas preheater.

The plate type preheater is built with a number of flat steel plates of small gauge, set about 1¼ inches apart. The combustion air and the flue gases pass between alternate sets of plates, so that the heat is transferred through the plates to the air. The plates are baffled so as to provide for maximum absorption of heat.

The tubular preheater is built of vertical steel tubes, similar to boiler tubes. The gases from the flue pass through these tubes, while the air for combustion is directed around them and absorbs heat through the tube walls.

In preheaters of the rotary type, metal surfaces with rotary motion pass from the zone of hot flue gases through the combustion air, to which they give up their heat.

The fuelbed in an underfeed stoker, Mr. Worker pointed out, may be considered as divided into four zones, as follows:

Zone 1—Here the fuel enters the furnace, moisture is evaporated and the volatile constituents of the coal are distilled.

Zone 2—In this zone partially coked fuel is burned.

Zone 3—Where the combustible is nearly pure carbon.

Zone 4—Where the small amount of combustible mixed with the ash is burned.

When preheated air is supplied to the furnace it hastens the evaporation of the moisture and volatile constituents in the coal, so that this stage in the combustion process will be completed before the fuel has traveled as far from the front of the furnace as would be the case in a furnace supplied with cold air. As a result, more of the stoker is given over to Zone 2, with a corresponding improvement in fuel burning. In Zone 3 it has been found that at this portion of the fuel bed, where coal mixed with refuse is likely to cause temporary blocking of the progress of the fuel bed, the use of heated air will help to keep this part of the fuel bed moving. In Zone 4, preheated air helps to burn out the carbon in the ashes.

In order to compare the performance of a stoker embodying all the elements of modern design, using cold air, with that of the same stoker with preheated air, Mr. Worker presented two curves. It will be noted in Figure 1, with cold air supplied to the furnace, that 83 per cent combined boiler-furnace efficiency is obtained at 200 per cent of boiler rating. The curve is flat, resulting in 74

(*Continued on page* 63)

Waste Liquors and Gases of the Paper Industry

Survey of the Recent Domestic and Foreign Patent Literature on the Utilization of Waste Liquors and Waste Gases of the Pulp Industry, 1912-1924

By A. Schrohe[1]

Translated, with additions, by Clarence J. West, Chairman Committee on Abstracts and Bibliography, T. A. P. P. I. (Contribution No. 47 of the Committee).

(Continued from last week)

313. 1916. British 102, 608. U. S. 1,358,162 (1920). A. Knöpflmacher. Charcoal from waste sulphite liquor.

Four thousand kg. (8800lb.) of waste liquor, 400 kg. (880 lb.) of potassium carbonate, 38 kg. (83.5 lb.) of calcium oxide and 60 kg. (132 lb.) of ground unburnt lime are evaporated to dryness and heated to redness in an iron vessel with the exclusion of air, the evolved gases being drawn off. The resulting material is treated in a Shanks lixiviating apparatus and the residue extracted in a centrifuge or filter press. The calcium compound may be extracted with acids (HC^1) and the remaining charcoal dried and ground.

314. 1916. Canadian 173,954. A. D. Fest. Waste sulphite liquor. The solids from the waste liquids are separated and calcined while the sulphurous gases of calcination are used to produce bisulpite liquor.

315. 1916. D. R. P. 297,374. M. Muller. Process for utilizing waste sulphite liquor.

Sodium bisulphite is roasted in a furnace under reducing conditions with waste sulphite liquor. The free sulphuric acid of the bisulphate is reduced to sulphurous acid which may be employed for the preparation of fresh sulphite liquor.

316. 1916. Swedish 40,894. E. and T. Kittelson. Half cellulose.

Wood is impregnated with black lye and boiled with colorless alkaline lye mixed with clarified black lye, with the aid of steam. The treatment is continued for a sufficient time and the mass is washed, ground and sorted.

317. 1916. Swedish 41,295. O. B. Carlson. Extracting soapy products resulting from the concentration of black lye.

The lye is evaporated to dryness, unsaponifiable matter is dissolved out by benzine, benzene or its homologs, while the organic sodium compounds are left.

318. 1916. Swedish 41,542. E. Murbe. Fuel from lignin precipitated from sulphite lye.

Lignin is removed from the autoclave by rinsing with water and freed from acid at the same time. The wet mass is dehydrated by filtering and treatment with hot flue gases which are then directed against the furnace walls by means of a blower.

319. 1916. Swedish 41,755. O. Olsson. Obtaining volatile products from waste sulphate lyes.

The sulphate waste lyes are concentrated in multiple apparatus and the uncondensed vapors are removed from suitable points in the evaporator and led to a condenser. The condensate is further treated to extract valuable products.

321. 1917. U. S. 1,213,415. A. F. Richter and T. L. Dunbar. Sulphite liquor.

Sulphur dioxide and spent liquor produced in the digester in the manufacture of sulphite pulp are separated from each other, the spent liquor is mixed with fresh sulphite liquor and then treated with sulphur dioxide from a burner (excess gas from the burner being combined with calcium acid sulphite to form the fresh sulphite liquor) and the sulphur dioxide separated from the spent liquor is then added to the mixed liquors charged with sulphur dioxide.

322. 1917. U. S. 1,213,555. R. F. Tompkins. Road composition.

Chestnut wood extract, spent tanning liquor or other tannin-bearing solution, with or without additional binders, such as waste sulphite liquor, is used with ordinary road materials, to form metal tannates in the body or surface of the road, to retard dusting, etc.

323. 1917. U. S. 1,213,887. G. A. Krause. Vaporizing or concentrating liquids, solutions, emulsions, suspensions, etc.

The finely divided substance is injected upward into a vertical cylindrical chamber from a nozzle. A heated, gaseous drying medium is injected tangentially at the bottom of the chamber so as to pass upward to the outlet in a spiral path of uniform diameter around the jet of the substance to be desiccated.

324. 1917. U. S. 1,217,157. M. F. Coughlin. Rubber composition and process for making the same.

Rubber is incorporated with dry sulphite waste lye solids, blown petroleum and asphalt, with or without other loading materials.

325. 1917. U. S. 1,217,218. H. C. Reed. Oxalic acid from waste pulp lyes.

The liquor is reduced to an approximately dry residue and concentrated nitric acid added in the proportion of 300 lb. of acid to 100 lb. of residue, the temperature being maintained at about 95° C. until oxidation is complete. Excess of nitric acid and water are then driven off by heat and the oxalic acid is recovered by crystallization.

326. 1917. U. S. 1,218,638. A. D. Fest. Treating sulphite waste liquor to make alcohol and recover sulphurous gases.

Waste sulphite liquor is concentrated, nearly neutralized with calcium oxide, subjected to alcoholic fermentation with yeast and more alcohol is added after the fermentation to precipitate lignin-bisulphite compounds. The precipitate is separated and calcined and the sulphurous gases evolved are absorbed by calcium carbonate or calcium sulphate and water. The alcohol is recovered by distillation.

327. 1917. U. S. 1,219,509. British 110,471. W. W. Walker. Fire-extinguishing composition.

Black liquor from soda pulp manufacture is used as a foam-producing agent in fire-extinguishing compositions, being added to one of the components of charges producing gases when mixed with each other, *e. g.*, a solution of sodium bicarbonate to be mixed with an aluminium sulphate solution.

328. 1917. U. S. 1,221,058. A. V. Jernberg. Fermenting waste sulphite liquor.

Waste sulphite liquor is treated with sufficient calcium cyanamide or reaction products of calcium cyanamide with water or steam to reduce its acidity to 2-4 per cent and then fermented at a temperature of about 25-32° C., after standing for 75 hours. Calcium carbonate or calcium hydroxide also may be used to assist in the neutralization of strongly acid liquors. The nitrogen compounds present as the result of using calcium cyanamide act as nutrient to the ferment and thus promote the fermentation. (*Cf.* No. 100.)

329. 1917. U. S. 1,221,259. L. H. Woodrop. Binder for briquettes.

The composition consists of an intimate mixture of bituminous coal, dried waste sulphite liquor, bituminous matter such as pitch and an inert granular material such as sand.

330. 1917. U. S. 1,223,158. Norwegian 28,084. P. G. Enger. Apparatus for recovery of cymol or other hydrocarbons produced during the manufacture of sulphite cellulose.

Apparatus is described. Cf. C. A. 11, 1903 (1917); 12, 94 (1918).

[1] Papierfabricant 23, 30-33, 63-65, 89-92, 158-161, 251-253, 284-287, 293-296, 306-307. (1925).

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331. 1917. U. S. 1,225,825. E. C. L. Kressel. Fertilizer from waste sulphite liquor.

Waste sulphite liquor (1000 lb., specific gravity 1.208-1.330) is mixed with stable manure (50-100 lb.) and with about 50 lb. of distillers or brewers yeast and the mixture is allowed to ferment for 24 hours at 30-40° C., with or without the addition of marsh soil rich in bacteria or addition of a liquor obtained by leaching marsh soil. The sulphite liquor used contains but little sulphur dioxide and is caused to ferment readily without neutralization. After the fermentation is well under way, there is added another 1000 lb. of waste sulphite liquor at a temperature of 40° and while agitating there is also slowly added 150 lb. calcium oxide (60 mesh powder), 80 lb. rock salt and 400-1000 lb. of feldspar or basic slag (or a mixture of them). The mixture gradually thickens, becomes granular and finally sets hard and on pulverizing yields a brown non-hygroscopic powder useful as a fertilizer.

332. 1917. U. S. 1,226,333. Canadian 190,881 (1919). W. Hoskins. Separating suspended pulp from sulphite waste liquors.

Sulphite waste liquor carrying pulp in suspension is passed over a layer of limestone. The carbon dioxide generated by the action of the acid in the solution upon the carbonate carries the pulp to the surface and it is skimmed off and recovered.

333. 1917. U. S. 1,236,868. J. Puring. Dye from waste sulphite liquor.

A composition which may be used for dyeing wool or silk black or blue-black is formed by mixing concentrated waste sulphite liquor with a solution of ferrous sulphate, removing the precipitated calcium sulphate and reacting on the product with gallic or pyrogallic acid.

334. 1917. U. S. 1,239,273. H. H. Hurt. Waste sulphite liquor and clay as a binding material for briquettes, sand cores and other materials.

Briquettes or sand cores made with a binder of concentrated waste sulphite liquor and clay are given greater strength by impregnating the article after its manufacture and drying with wax tailings or paraffin. The tensile strength of sand cores may thus be increased about 40 per cent.

335. 1917. U. S. 1,249,287. C. N. Waite and J. E. Hedin. Wood pulp.

Spent liquor from a previous digestion of wood is evaporated, organic matter is burned out and the sodium carbonate thus obtained is dissolved together with lime to form sodium hydroxide. Sufficient sulphur is added to convert part of the sodium hydroxide into sulphide and the liquor thus prepared is used for digesting wood.

336. 1917. British 103,649. E. Oman. Lignin derivatives.

In the treatment of waste sulphite cellulose lye with a salt solution, such as sodium chloride, a precipitate is obtained consisting of a ligninsulphonate, and the filtrate contains lignonesulphonates. Oxylignin is obtained by fusing a ligninsulphonate with caustic alkali, dissolving the melt in water and acidifying. An oxidizing agent, such as potassium chlorate, may be added to the alkali; the process may be applied to waste sulphite cellulose lye itself or to the lye deprived of lignonesulphonates.

337. 1917. British 103,650. French 485,412 (1918). E. Oman. Lignone derivatives.

The treatment of waste sulphite cellulose lye with a salt solution, such as sodium chloride, gives a precipitate consisting of a ligninsulphonate; the filtrate contains lignonesulphonates and may be evaporated down and the precipitated sodium chloride removed. Oxylignone is obtained by fusing the concentrated lignonesulphonate solution with caustic alkali, dissolving the melt in water and acidifying; an oxidizing agent, such as potassium chlorate, may be added to the alkali.

338. 1917. British 103,651. E. Oman. Lignin derivatives.

Nitro compounds are prepared by nitrating ligninsulphonic acid or its salts, obtained from waste sulphite cellulose lye. The process may be effected by means of dilute nitric acid at a moderately low temperature; part of the product precipitates and the remainder is separated from the reaction mass by neutralizing and adding alcohol.

339. 1917. British 103,652. E. Oman. Lignone derivatives.

Nitro compounds are prepared by nitrating lignonesulphonic acid or its salts, obtained from waste sulphite cellulose lye. The process may be effected by concentrating the lye freed from ligninsulphonates and nitrating with nitric acid or mixed acids; the nitro compound precipitates or is separated by adding sulphuric acid or by neutralizing and adding alcohol.

340. 1917. British 103,653. Norwegian 28,934 (1918). E. Oman. Lignin derivatives; dyes.

Nitroso derivatives are prepared by treating with nitrous acid, or a substance yielding it, ligninsulphonic acid or its salts, obtained from waste sulphite cellulose lyes. The process may be effected by treating a ligninsulphonate solution with a nitrite and acid, or with nitrous gases. The product is salted out from the reaction mass and may be used as a coloring matter. Instead of ligninsulphonic acid, waste sulphite cellulose lye may be used.

341. 1917. British 103,654. E. Oman. Lignone derivatives.

The process of 103,653 is applied to lignonesulphonic acid or its salts.

342. 1917. British 103,655. E. Oman. Lignin derivatives.

Ligninsulphonates are precipitated from waste sulphite cellulose lyes by the addition of a salt and are washed with solutions of, say, sodium chloride or alcohol, containing free alkali, such as soda or sodium hydroxide; the resulting product can be dried at high temperatures without decomposition.

343. 1917. British 103,822. E. Oman. Dyes.

In the process of manufacture of azo dyes from diazo compounds and ligninsulphonic acid or its salts (*see* No. 76), an inorganic or organic base is added after the coupling, or to the diazo compound before coupling, whereby the corresponding salt of the azo compound is formed. Sodium, potassium, ammonium, barium or calcium hydroxides, methylamine and ethylamine are specified as suitable bases.

344. 1917. British 106,493. Danish 22,305; 22,482. Swedish 44,604 (1918). E. Oman. Lignin and lignone derivatives.

Ligninsulphonates and lignonesulphonates, contained in waste sulphite cellulose lye, are separated by saturating the lye with a salt, such as sodium, potassium or ammonium chloride or sulphate; the ligninsulphonates are thereby precipitated while the lignonesulphonates remain in solution. Oxylignin and oxylignone are obtained by treating lignin or lignone sulphonates with alkali.

345. 1917. British 112,395. Swiss 76,687 (1918). Zellstoff-Fabrik Waldhof. Purifying sulphite cellulose liquor.

Sulphite cellulose liquor, freed from lime by addition of carbonate of sodium, potassium, ammonium, etc., is treated to convert the residual salts to sulphates and is then cooled to crystallize them out. Before addition of the requisite quantity of sulphuric acid, the liquor may be concentrated to 30° Be. It may be stirred while cooling and allowed to stand for some hours or days, after which the crystallized sulphates are removed, the liquor being then substantially free from mineral matter.

346. 1917. British 115,350. Swiss 76,297. Zellstoff-Fabrik Waldhof. Disposing of waste gases.

Waste noxious gases from chemical operations, particularly the manufacture of cellulose, are disposed of by conducting them to the gasifying chamber of a gas generator, such as a gas producer or the like.

347. 1917. Swedish 42,374. H. O. V. Bergström.. Wood alcohol from the products of the soda-cellulose manufacture. (Addition to 38,682.)

The condensate which is obtained by condensing the vapors resulting from the distillation of the boiling liquid used, either with or without the condensate of the vapors arising from the boiling, is subjected to the treatment specified in the principal patent.

348. 1917. Swedish 42,440. K. W. Sundblad. Extracting alkaline substances from the products of combustion from regenerative processes in sulphite or soda cellulose factories.

The substances are obtained by washing and cooling the gases and a portion of the resulting solutions is used for washing to remove lime used as an alkalizing agent and then for dissolving fresh soda.

349. 1917. Swedish 42,973. A. V. Jernberg. Preparing sulphite waste for neutralization.

The sulphite waste is passed through a layer of bone-black before neutralization.

350. 1917. Swedish 43,002. P. G. Enger. Crude product containing cymene, etc., and resins, from boiling sulphite cellulose.

The boiling acid which has absorbed gases and acids from the boiler, is conducted through a series of receivers wherein the crude product rises to the surface and is skimmed off at intervals.

351. 1917. Swedish 43,298. P. G. Ekström. Dehydrating peat.

Wet peat is mixed with sulphite waste liquor and after reaction therewith, the mass is subjected to pressure.

352. 1917. Swedish 43,267. Aktiebolaget Ethyl. Purifying alcohol from sulphite cellulose waste.

The impure alcohol, separated by distillation from the ferment, is fractionally distilled and the impure fractions are purified by basic reducing agents.

353. 1917. Norwegian 27,637. A. H. Kiaer and Co. Disintegrating sulphite waste liquor.

Indirect heating is combined with direct heating, so that the temperature of the liquid is first brought, by indirect heating, to a point where disintegration products are precipitated on highly heated surfaces, whereupon heating is interrupted by the introduction of steam.

354. 1917. Norwegian 27,927. E. Oman. Producing sulphur colors from oxylignin or oxylignone.

The initial materials are heated with sulphur and alkali sulphides and the products are dissolved in water, acidulated and the color is precipitated.

355. 1917. Norwegian 27,940. E. Oman. Producing sulphur colors from ligninsulphonic acid.

The sulphonic acid is treated with sodium chloride, heated with alkali sulphides and the product dissolved in water, acidulated and the sulphur color precipitated.

356. 1917. Norwegian 28,147. H. B. Landmark. Extracting free sulphur dioxide from waste lye and concentrating purified lye by its contained heat.

The lye is sprayed to expel sulphur dioxide gas, then it is conducted into a receiver under low pressure and allowed to concentrate by its contained heat.

357. 1917. Holland 1,763. Aktieselskabet Sulfir-Sprit. Extracting alcohol from sulphite lye.

To the lye is added milk, skim milk, or whey, then the mass is slightly acidulated, heated, the casein-lignin precipitate filtered off, acid is added to the filtrate and the liquid heated to hydrolyze, cooled to fermenting temperature and fermented with ordinary ferment.

358. 1918. U. S. 1,268,193. S. D. Wells. Paper pulp.

In the production of paper pulp by digesting wood or other cellulosic fibrous materials with chemicals such as alkalies, spent liquor is introduced while the digestion is in progress, to reduce the concentration of the digesting liquor and protect the cellulose from attack without lessening the action of the solution upon the incrusting substances.

359. 1918. U. S. 1,269,287. A. Lackman. Fermenting constituents of sulphite waste liquor.

Hot sulphite waste liquor is treated with sulphuric acid in equivalent proportion to the sulphur dioxide and sulphites present, preferably at boiling temperature, and after removing the sulphur dioxide in gaseous form, the acidified liquor is cooled and fermented with yeast to produce alcohol.

360. 1918. U. S. 1,273,392. British 120,520. R. H. McKee. Alcohol from sulphite liquors.

Yeast is added to waste sulphite liquor from cellulose manufacture, containing some free residual sulphur dioxide, the solution is aerated during fermentation to maintain the fermentive action and alcohol vapor is recovered from the exit gases by scrubbing with unfermented liquor.

361. 1918. U. S. 1,273,662. W. Petrie. Tanning hides.

Advocates the use of waste sulphite liquors, particularly of "spruce extracts."

362. 1918. U. S. 1,279,604. Canadian 187,316. O. G. Stage. Process for treating cellulose-containing materials and recovering substances used therein.

After treating wood chips or similar cellulosic materials with a solution of sodium sulphate, hydroxide, sulphide, sulphite and carbonate in a digester, part of the black liquor is withdrawn, weak liquor is introduced into the digester to replace the liquor withdrawn, the pulp in the digester is washed by the liquor thus weakened and the liquors are all preserved under digester heat and pressure to maintain them in condition for subsequent burning without loss.

363. 1918. U. S. 1,283,296. J. Puring. Dyes from waste sulphite liquor.

Waste sulphite liquor (100 cc. of 30° Be) is mixed with 10 grams of alpha-naphthylamine and the latter is dissolved by gentle heating. The material is then cooled and 2-25 cc. strong nitric acid added. Intumescence results with the production of a gray porous mass. A 1 to 2 per cent solution formed from this product dyes wool, silk, or leather directly by mere immersion, removal, washing and drying. The shade produced depends upon the proportion of nitric acid used. Further details in C. A. 13, 194 (1919).

364. 1918. British 114,312. F. Gerling, Gerling Chem. Werke. Lubricants for boring, drilling, etc.

Sulphite cellulose lye is used as a substitute for oil for lubricating purposes in drilling, turning and like operations. The lye is neutralized by means of an alkaline or other "saponifying" solution.

365. 1918. British 117,414. U. S. 1,260,448 (1917). H. R. Rafsky. Coated paper.

Paper is coated with "lime mud," a material obtained as a precipitate in the causticizing, by means of lime, of the sodium carbonate obtained from the waste liquors produced in the wood pulp, esparto pulp and other industries. The "lime mud" may be reduced by grinding and is mixed with an adhesive such as casein and a small amount of alkali.

366. 1918. Canadian 183,261. U. S. 1,212,291 (1917). F. A. Vogel. Manufacture of briquettes.

A mineral oil is heated to approximately 250° F. and to it is added during agitation sulphite pitch solution. When the mixing is complete the product is mixed with fine particles of fuel and formed into briquettes.

367. 1918. Danish 23,127. E. Oman. Treating sulphite dye for further working.

Ligninsulphonic acid and its salts are salted out and treated further in the usual manner, either separately or together. (*Cf.* Nos. 336 ff.)

(*To be Continued*)

SAVING FUEL BY PREHEATING

(*Continued from page 60*)

per cent efficiency at 500 per cent of boiler rating. Figure 2 shows the performance of the same stoker using combustion air heated to 350° F. to 500° F. With the preheated air 90 per cent efficiency is obtained at 200 per cent boiler rating.

The CO_2 performance with preheated air will range from 15.5 per cent at 250 per cent boiler rating to 16.5 per cent at 350 per cent rating and above. Loss of combustible in the refuse can be held down to less than 0.35 of 1 per cent of the B. T. U. content of the coal, or 4.5 per cent combustible in the ash. Preheating the air makes it easier to burn coal that is liable to smoke entirely without smoke.

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Paper Making Industry

Bleaching

Use of Liquid Chlorine in the Manufacture of Bleach Liquor. B. Smart. Wochbl. Papierfabr. 56, 226-227 (Feb. 21, 1925). German practice in the use of liquid chlorine for the production of calcium hypochlorite is described. A pre-treatment of pulp fibers with chlorine gas, followed by hypochlorite, results in a considerable saving of chlorine.—J. L. P.

Bleaching of Wood Pulp. Rauchhold. Papierfabr. 23, 191-193 (Mar. 23, 1925). The bleaching of mechanical wood pulp by means of the following methods is described: the wet machine, the kollergang, and the beater. Sodium and calcium bisulphites are the best and most economical chemicals for this purpose.—J. L. P.

Bleaching of Wood Pulp. IV. Effect of Consistence on Bleaching Sulphite Pulp (Low Density Study). C. E. Curran and P. K. Baird. Paper Trade J. 80, No. 16, 51-53 (Apr. 16, 1925). With consistences of 1 to 7% and temps. of 21° to 46° C., the final color was practically independent of either consistence or temperature, and the rate of bleach consumption increased with the consistence, the actual time differential being greater att lower temperatures.—A. P. C.

Attachment for Beating Engines. J. L. Harris. U. S. pat. 1,517,783, Dec. 2, 1924. A deflector block is provided in front of the beater roll, to cooperate with the roll to regulate the feeding of stock to the roll. The position of the block is adjustable towards or away from the roll.—A. P.-C.

Utilization of the Black Liquor from Soda Pulp Mills. E. Hagglund. Ger. pat. 400,661. Papierfabr. 23, 100 (Feb. 15, 1925). Black liquor of a desired concentration is freed of a portion of its organic constituents by precipitation, and fresh alkali is substituted. The sodium acetate in the organic residue is converted to acetone by dry distillation at 400° C. Previous to the distillation salts of bivalent metals are added as contact substances, such as barium or calcium acetate or carbonate.—J. L. P.

Sizing

Theory and Practice of Rosin Sizing. Rudolf Lorenz. Wochbl. Papierfabr. 56, 259-261 (Feb. 28, 1925); 421-424 (April 4). The beginning of a series of comprehensive articles dealing with the theory and practice of rosin sizing. These papers comprise the introduction and variations in engine sizing.—J. L. P.

Recent Investigations in the Field of Paper Sizing. Rudolf Lorenz. Wochbl. Papierfabr. 56, 322-324 (Mar. 14, 1925); Papierfabr. 23, 205-208 (Mar. 29); Zellstoff U. Papier 5, 125-126 (Apr.). An address in which recent developments in the field of paper sizing are outlined. The work of Teicher, Heuser, the author, and others is summarized with particular reference to colloid-chemical principles.—J. L. P.

Rosin Difficulties and the Colloid-Chemical Theory. Rudolf Lorenz. Papierfabr. 23, 177-178 (Mar. 15, 1925). Polemic with Jarl Enckell [Ibid., 23, 13-16 (Jan. 11)].—J. L. P.

Mechanism of Resin Sizing. J. Melrose Arnot. Paper Makers' Mo. J. 63, 142-149 (Apr. 15, 1925); World's Paper Tr. Rev. 83, 1250-1256 (Apr. 10, 1925); Paper Making 44, 208-212 (May, 1925). A review of our present knowledge of the subject. Microscopic examination of sized and unsized papers and of size emulsions before and after precipitation with sulphate of alumina appears to indicate that the resin exists as a continuous coating on the fibers, and that either the alumina is deposited as an extremely attenuated coating on the resin particles or is separated out in a state of much finer division.—A. P.-C.

Coating and Filling Materials

Use of Starch Products in Paper Manufacture. E. Tromp. Papierfabr. 23, 109-111 (Feb. 22, 1925). Comparative investigations are reported on the influence of potato starch and starch products, such as "paperine," on the properties of rosin sized papers, containing clay as a filler. Paper prepared with 2 per cent paperine and samples treated with 6 per cent potato starch gave the following respective values for the different tests: ash content, 12.3 and 11.3 per cent; folding endurance 170 and 110; tensile strength in kg. 4.2 and 4.0; tearing length in m., 3950 and 3750; stretch, 2.0 and 1.5 per cent; and rosin retention 2.5 and 1.8 per cent. Thus, 1 part of paperine produces better results in paper than 3 parts of potato starch. Paperine consists of white transparent granules, which are soluble in 20 parts of cold water and yield a neutral solution.—J. L. P.

Chalk as a Filler. Vorbruggen, H. Postl and P. M. Hoffman-Jacobsen. Wochbl. Papierfabr. 56, 46-47 (Jan. 10, 1925). Three letters on this subject. Chalk as a filler for all kinds of paper is not advocated; for cigarette and blotting paper it appears to be advantageous. The fibrous strength decreases on the addition of chalk to paper stock.—J. L. P.

New Freeness Tester. F. M. Williams. Pulp & Paper 23, 443-444 (Apr. 23, 1925); Paper Mill 49, No. 16, 26, 30 (Apr. 18, 1925). Description of a modified freeness tester which is so designed that pure water can be used as a standard, the reading obtained with any quantity of pure water in the bowl being 50 per cent of the amount used. The instrument is claimed to be easily standardized. Its advantages are outlined, and the importance of accurate freeness testing briefly discussed.—A. P.-C.

Dryness Determination of Fibers. C. G. Schwalbe. Papierfabr. 23, 233-234 (Apr. 5, 1925). The drying of fibers at 105° C. for 4 to 8 hr. gives satisfactory results providing the dried samples are not used for other analytical purposes. Vacuum drying at water-bath temperature is much more rapid. Sources of error are lack of uniform oven temperature, and over-heating, due to placing the samples on weighing-glasses in a metal container. The latter may be avoided by placing a piece of cardboard between the metal and the glass. The use of small pulp samples in large weighing glasses is recommended. The temperature is too high for fibrous materials containing soluble carbohydrates and pectin, and losses may occur owing to decomposition. For determining the dryness of small samples the petroleum or carbon disulphide procedures are recommended. The method of Obermiller [Z. Angew. Chem, 36, 429 (1923); 37, 940 (1924)] is rapid and involves heating the fibers in a current of air but requires special apparatus.—J. L. P.

Oregon Paper Mills at Full Capacity

PORTLAND, Ore., November 27, 1925.—Papers mills on the Willamette River, near Oregon City, Ore., are running to full capacity, with all shifts full and all machinery in use, after a lull due to the low water in the river. The regular rains for this section have now commenced and the condition has resulted in the addition of hundreds to the payrolls of the mills. The Crown-Willamette Company at West Linn on the west side of the river, and the Hawley Pulp and Paper Company at Oregon City, are the main plants.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

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THE AMERICAN PAPER AND PULP ASSOCIATION

Conducted by THOS. J. BURKE, C.A., Sec-Treas

Some Federal Tax Problems*

By J. A. Albrecht, of Buffalo, N. Y.

Mr. President, Ladies and Gentlemen: I am satisfied that all of you fellows are Einsteins, for if you weren't, you would not have been able to understand the first speaker. I would say that it sounded like Greek to me, and I just hope that you will be able to understand my speech, and that it won't appear to be Greek to you.

I hope that you all know your Secretary, Tom. When I say "know" him, I mean it to the fullest extent of the word. He wrote a letter to me and told me that this city was a beautiful city. And then he immediately qualified the remark by saying that he means it is beautiful for situation. He said he thought we had an advantageous situation. Perhaps you know what he had reference to.

At any rate I hope to get as close to the subject assigned to me as Buffalo is to Canada, although the closer one gets to Canada, the more difficult it is to get close to things American.

The program refers to me as a C.P.A. When my daughter saw it, she said, "Daddy, they should have said S.P.C.A."

Now Tom must have just returned from abroad when he made up that program and no other excuse is necessary to gain our forgiveness. However, I am sorry that you were misled into thinking you were to hear a learned speech right on the subject, when as a matter of fact you are about to be annoyed by an attorney who will be cagey enough to be non-committal on every point.

There is a story of a colored man who told the boss that he had been elected the preacher of his little church.

"Sam, how in the world did they ever elect you?"

Sam said, "Well, boss, yo see it am dis way. In our church we hab a terrible ornery element in dat ere church ob ours, and they jest ris up and demanded representation."

Now I come from the L.L.B. gang and not from the C.P.A. gang. I wish, of course, that I could talk to you under that name. You fellows are being held in every high esteem and I know that the esteem in which the legal profession is held is entirely unwarranted, but it is a condition that must exist.

The first point on the subject of my address is in connection with the handling of tax cases by attorneys and accountants. Attorneys generally are not up on accounting, and accountants are generally down on the law.

I think that the taxpayer now-a-days is beginning to realize more than ever that it is absolutely necessary to have an attorney and a C.P.A., working in conjunction, with the adjustment of their Federal and State taxes.

The tax legislation in its final analysis consists of laws. They are drafted by lawyers; when disputes arise the questions are taken to court and argued by lawyers; and the laws are finally interpreted by courts composed entirely of lawyers.

On the other hand, the preparation of the tax report itself, the keeping of the proper books and records, so that the information required can be readily obtained, the reconciliation, when necessary, of the book figures to those used in the tax report, and the various other details necessary to properly complete a true report, require the services of the accountant.

The average attorney, engaged in the preparation and trial of cases and various other phases of legal practice, rarely sees his clients' books and records. Accordingly, if given wrong information or asked to pass upon an improperly filled in tax report, he cannot, unless the error be apparent on the face of the papers exhibited to him, properly protect or advise his client.

Accountants, therefore, should know that in order to obtain the best results, they must have the help of lawyers versed in the tax laws. The lawyer should also realize that the tax reports must not only be reconcilable with the taxpayer's books and records, but both must reflect sound accounting practices, and for this he needs the services of trained accountants.

It is necessary in the preparation of the tax return to have both of these experts on the job, because it is the duty of every official to see to it that his company pays the least amount of tax—I say it is his duty!

Our courts have been clear and emphatic in pointing out the difference between avoiding or reducing taxes by lawful methods and evading them by unlawful methods.

In "United States vs. Isham," the court passed upon a so-called evasion of stamp tax on promissory notes. Isham gave memorandum checks payable at a future date, instead of notes, to avoid stamp taxes. The United States Supreme Court pointed out that such checks were well known in commercial law and that in using them the taxpayer merely exercised a legal right, saying:

"If a device to avoid taxation is carried out by means of legal forms, it is subject to no legal censure."

The changing of a residence by an individual in order to avoid taxation has long been recognized as the exercise of a legal right.

In "Weeks vs. Sibley," the court was considering whether the transfer of a business by a corporation to a trustee in order to avoid taxation did not constitute an evasion of Federal Tax. The Bureau of Internal Revenue had ruled the transfer a sham and subterfuge. They held:

". . . it is the opinion of this court that the right to change the status of an organization, or to dissolve an organization in any legal manner, is not made ineffectual because the motive impelling the change is to reduce or avoid taxation in the future."

It is well recognized, not only by our courts, but by all who

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have made a careful study of the subject, that a thoughtful business man is within his rights in taking proper steps which are intended to result in exemption from or saving in taxation. Such steps must be openly and actually taken, so that the taxing authorities in the first instance may know exactly what was done. Concealment would make the same steps evasions. While the construction placed upon a tax act by an officer charged with its administration is entitled to the respect of our courts, there is often room for honest differences of opinion between tax payers and tax officials. The courts are not, however, bound to follow either one or the other.

In referring to the limitations of official construction, Mr. Chief Justice Taft said in the recent case of "Smietanka vs. First Trust and Savings Bank" (42 S.C.R. 223):

"This seems to us to graft something on the statute that is not there. It is an amendment and not a construction."

Your lawyer will tell you what steps are legal and what are of a criminal or fraudulent nature. There are many legal means of avoiding or reducing taxes.

The point that I wanted to bring out about that is this: In view of the fact that the law must be administered in the end by lawyers, it is but natural that they should in time arrange things so that they come first, and then the accountants. You can already feel the effects of this movement. It will be the case before long that the accountant prepares the statements and the attorney argues the case. My advice is, therefore, to get an attorney in every tax case.

The accountants naturally take a correct view of the methods of arriving at a result, but they often overlook the fact that Congress, either intentionally or not, upset some of the nicest laid rules of accounting.

For instance, should depreciation be taken into account in arriving at the profit on the sale of an asset? I have no doubt but that the logic of the accountant's mind prevailed on the Bureau to take it into account, but lawyers recognize it as logical that depreciation once deducted from the tax return should be added back in order to determine the profit—but logic has nothing to do with Congress, and Congress certainly has nothing to do with logic.

We are of the opinion that Congress is wrong, but nevertheless the law of the land and not the laws of logic apply in this case.

Congress, in its wisdom, said the profit on the sale of an asset is the difference between the cost and the selling price. Why should any one do anything else, and we have been filing claims for many, many years for refunds to protect our client's right when there was a sale of an asset.

We realized that the Bureau was wrong and we hoped that some day some one would take the thing to court and when the case that was taken to court was decided, that our claims for refund would entitle our clients to what was due them. That has happened and the case is now before the Supreme Court of the United States and the lower court has held that depreciation was not to be taken into account when determining the profit or loss on the sale of an asset.

That, I think, will have a lot to do with the timberlands, for should you, when you sell timberlands, take into account the timber that you took off of them? The law doesn't say so. The law says that if you buy timberland for $1,200 an acre and take all of the wood off and sell the land for $1000 an acre, you have lost money. Just read the law on that subject. It doesn't say that you should take into account anything but the cost and selling price.

The court acclaimed a rule here the other day in the case of an oil well. The commissioner was wrong when he said that the amount of oil taken out of the ground had anything to do with the loss and profit on the sale of the land, and the court acclaimed that there might have been more oil in the ground at the time of the sale than at the time of the purchase. I can easily see where the courts can come to that conclusion with regard to oil, where you can't see it, but in the matter of timberlands, where it can be seen and absolutely known how much timber there is, they can see that there is not as much timber on them at the date of sale as there was at the date of purchase.

It doesn't pay, therefore, to follow the rules of accountancy in making up tax returns. Congress may, if it wishes, pass laws which will upset all of your favorite formulas. If it does, follow the law and think what you please about Congress.

Protecting the taxpayer's rights is now, I dare say, our most important work. Those taxpayers who did not file claims for refund or keep their war years open now find themselves unable to get a refund because of this very recent decision of the Tax Appeal Board that the taxes do not reduce the invested capital at the beginning of the year.

It is true in small companies that wouldn't mean much, but in a company paying $100,000 taxes, I dare say that the invested capital at the beginning of the year had heretofore been reduced by $50,000, and to that extent they paid more taxes than under this decision. There is another question of the difference between what the law says and what the rules of accountancy would indicate what would be the logical thing to do.

This Tax Appeal Board, fortunately, is formed of members who are attorneys, and they brushed aside the regulations and found nothing in the law which said that the invested capital at the beginning of the year should be accounted, and they said no matter whether it should be or shouldn't be, Congress left it out—all the laws must be construed in favorof the taxpayers—and we are busy in our office now, pulling out all of the cases changing the tax returns, and preparing the claims for refunds, and our claims will receive attention in due course of time, probably before January 1.

You should advise your companies to do the same thing. If your company has paid a tax within the last two years, you should file a claim for refund, although the five year period on limitations has expired, because under another provision of the law you can file a claim within two years after additional tax has been paid. That may extend the statute, perhaps, seven years for you, and the refund on account of this decision will no doubt be more for 1917 and 1918 than for other years.

It isn't so long ago that a Revenue Agent examined one of the individual tax returns of a client of our office, and it was for the year 1919. In making the examination he discovered that this taxpayer had had a sale of certain stocks in the year 1918, however 1918 was outlawed. He made the examination and sent in the report for $5000 or $6000 additional taxes due. It was all right for him to send in his report, and I think he was performing his duty as an employe should, but the Treasury Department, instead of sending back any of the details or information showing the calculations, wrote a letter such as this: "The records of our office show that you owe $5,600 additional tax for the year 1918. Before the Commissioner can assess this, it will be necessary for you to sign the enclosed waiver." I want to tell you that that is almost highway robbery, because such a letter as that is misleading, and I think a great many of them do go to taxpayers who do not know that they should present those letters to their attorneys, and when they see the words "it is necessary" they just sign it.

The Department has no right to use that kind of language and send out such letters.

That happened eight or nine months ago, and we are still corresponding and trying to get the Department to say how they arrived at that amount. The proposition was that the additional tax could not be collected because the statute had run against it, and when we wrote in about the matter, they wrote back an evasive letter saying that in view of the fact that the statute had run against it, the tax could not be collected, as much as to say "let's drop the matter." I wrote back and asked them to say so directly, and I have never heard from them. That letter remains unanswered.

I imagine that you know by now what they do in regard to waivers. Do you suppose for a moment that Congress ever intended that the Treasury Department should "lay on" its oars, so to speak, until just prior to the running of the statute, and then write to the taxpayers, "If you don't sign this waiver, we shall be compelled to assess additional taxes," and you have no control over the amount, and they make it worth their while. I think Congress intended that they should go along and if they missed you, they missed you, but the Treasury Department has taken no such attitude and they have made it absolutely impossible for them not to sign waivers. I say that because very few have the nerve not to sign them although I advise them not to sign them. But when it comes to the point of signing, they will say, "I guess I had better sign it." If they refuse to sign them and the Department assesses the tax, you have this satisfaction: They can't assess you any more. You may have to pay it, but they can't assess you any more. It may happen that they will change their minds and increase the tax anyway.

I remember I had a fight with them, and I said, "I won't sign the waiver. Go ahead and assess, but if I sign this, you are likely to double it." There is something to think about in connection with the filing of waivers. Anyway, be very careful about them and always file claims for refunds, and if you don't have any good reason, file them anyway. If you have no other reason, just put on there that there will perhaps be decisions coming out later that will require you to file them.

Now you people have form T.P. to bother with. I would say about form T.P. that the fellow who wrote it died and nobody else in the Department of Internal Revenue knows what it is for. It is only used against the taxpayer, never in their favor.

I think it is a bad reputation that the Bureau has with me. I have been going down there since 1917, and before that I was one of the crowd myself, but it has changed greatly since I was there.

Now the valuation of timberland, I am satisfied, is a subject that very few people know anything about. There are no two experts who can come to the same figures. I think you are about as well off if you don't file form T.P. If you sent in twenty of them, they would pick out the one against you and never receive the rest. It may have been here or there that some taxpayer got some results, but they had some awfully good representation besides. The Bureau isn't fair in using the information. If it were, it would take a different attitude in connection with the information that is filed.

Now there are people who know how to value timberlands and there are people who know how to value oil wells, and that is their profession. They live on an income from that source, and I would say that you have to have an expert to qualify as such.

It is surprising to me that the Department has not discovered that they would get along very much quicker if they would employ the very best men they could get and keep them in the Department, no matter what the salary is. We have a tax case that has been up for five years and the Government has paid some one's salary to keep track of it. Had they paid somebody $15,000 a year and put them on the job, we would have been satisfied and would have come to a conclusion in this case in three or four months. It would be cheaper to get rid of cases in two or three months than to keep an employe there for five years to look after it. It is simply because it is impossible for those people to do it any faster. They can't comprehend the points involved. They know nothing about depreciations.

Claim all that you can screw your courage up to claim, and you will find if you read the law that the depreciation need not be the actual depreciation. It only requires that you have a reasonable reduction for depreciation. "Reasonable" is entirely different from "actual" depreciation. It is an awful hard thing to get them to see it down there.

I have in mind that Congress really intended that the cost of an asset should be returned to the taxpayer over a reasonable length of time, and they have unfortunately used the word "depreciation." If you were a legislator you would kind of think, "Here is a man that starts in business, and he has $100,000 worth of machinery. We ought to let him have that tax free, and we will earn it back. We should let him have the $100,000 of his profits tax free"—so their minds were running right, but they called it "depreciation."

But anyway the income tax unit takes the thing literally and tries to understand what depreciation is, and I think it would require an Einstein to understand that, but the poor old income tax unit flounders around and allows one person three per cent and then another gets 10 per cent, and I would say to claim all you can.

The Board of Tax Appeals has been very liberal in allowances in depreciation and they are taking more of the practical point of view. They can easily see that when the depreciation equals the cost of the asset, the taxpayer can't have any more deductions and then all of the troubles will stop. If you want to get it all written off, take a large amount and then fight for it. It is a fact that you have to watch them and you have to play your cards in order to beat them, for they are playing their cards to beat you.

What do you suppose happened just as soon as the Internal Revenue knew that the Board of Tax Appeals was functioning? They closed up shop and went on a vacation. It was never intended to be that way, but I would say that it is just as well if you never go before them, but send it down by correspondence, and in due time you will get a rejection, and then you can go before the Tax Appeal Board. It is no longer a Board of Appeals, but a Board of Jurisdiction. It was intended that you should have a case and then go before the Board of Tax Appeals, and secure a hearing on the appeal of your case, but the Bureau doesn't give you the consideration it used to, and the first hearing amounts to nothing and is really no hearing at all. When you go before the Tax Appeal Board you find that the Board claims to have original jurisdiction and tries all of these cases *de novo*, and the Commissioner is not bound before the Board on any of the statements made on any of the deficiency letters. The Commissioner will admit that the value of your timberlands on March 1, 1913, was so much, and the Board will say that he is wrong and will make it some other amount, if it so pleases.

The way the things are run down there it will be necessary for Congress to change the name of the present Appeal Board and call it the "Tax Court" and establish it on the same lines that our regular courts are run. It must have jurisdiction and its decision as to the facts should be final, similar to what it is in the regular court. Then they should have a Board of Tax Appeals just the same, called the Tax Court of Appeals and you would be able to argue your case there. If they don't do that, they are going to have a situation where you will get no satisfaction from the unit.

Now it happens, fortunately or unfortunately, that the courts are jammed full of bootlegger cases, and if we get as many more tax cases, we will never get to the end of our trials. I don't know how long it takes to get a case through the Federal Court here in Buffalo now, but it depends upon how many criminal sessions they hold, and it is a long time. There isn't any reason why there shouldn't be a separate tax court built along the same plans as our regular courts so that the cases can go right straight along through, and when they come out, either be subject to a final appeal to the United States Supreme Court or appeal to the Division, or something like that.

Of course the amount of money that it is going to cost to get these cases decided is going to be just as much, whether they create additional United States District Courts or courts in Washington. So the effect on the unit has been that they lay down on the job and pass the responsibility to the Board of Tax Appeals. That is of importance to all of you who have tax problems pending and it will be well for you to remember these things.

The Couzens Committee has also had a bad effect on the

income tax unit and claims for special assessment are not receiving the consideration they did before the Couzens Committee was created. I think the Special Assessment Committee in Washington now is just there for the purpose of denying claims. They are not going to let Mr. Couzens get anything on them. That is bad. They should have backbone enough to carry out the duties that were imposed upon them, regardless of the investigations that are made by Congress. It is a particular hardship on those taxpayers whose claims were not settled before the Couzens Committee was organized and it is quite an injustice to those taxpayers. It is a situation that has not quite worked out with the Board of Tax Appeals because of the confidential nature of the returns of other taxpayers which must be used in connection with special assessments. Maybe the new law will straighten out the Board's jurisdiction along that line.

Now the next point I want to talk about is the new Revenue Bill. I don't know whether the tax reduction will apply to 1925, or begin January 1, 1926, and in order to be sure of it, I am telling our clients to take all of the reductions they can in 1925, because it will be better to have the benefit of the present rates than of the lower rates. For instance, that would apply in donations. Some people have made, or are contemplating making donations, and I would say to make them before the end of the year because you will get the reduction before the end of the year.

Apparently there is not going to be a reduction in tax rates for corporations, and if there is any guess as to what would happen. I would say that the tax on corporations might go up, so save all of your deductions for next year. You have to do some figuring, and forget your cost system, "this is going to save me money"—put it in.

They put you on an accrual basis, but still, I think that accountants are generally able to see things and managers are able to see things in advance, and they can postpone things for just a month or so. I know this: In sitting down with my clients and knowing them as I do, talking over the situation, a great deal of tax can be saved. I make it a point to go through their factories, and I know their works just as well as it is possible for a greenhorn to know them, and I try to learn what their problems are, and what they intend to do. It does result in saving them considerable money in the way of taxes, putting them in the right year, etc., and all in all, unless you are a tax man and you know your problems and know the road you are running along, I can't do much for you, for after the water has gone over the wheel the transaction is completed and it cannot be changed, so the unit says.

Now there will be about $300,000,000 reduction in taxes, and I really think that means $300,000,000 invested in industry, instead of being spent by the government in things that are not of a constructive nature.

Tax-exempt bonds ought to go down a little in price; I don't know how much, but they will be less attractive to the wealthy man, and instead of holding them in such large quantities, he will find it possible to buy higher yielding, less secure bonds, pay the tax on the higher yield and have more left under these lower rates than he has been able to have under the present rates. Any of you that have tax exempt bonds, holding them for that purpose, should sell them during the month of December at the present level, because they are going to drop off as soon as the wealthy people begin to put them on the market.

At the same time it may have an effect of increasing the price of taxable bonds, because as soon as a wealthy man sells the tax exempt bonds, he will then put his money into the taxable bonds, and it will be the thing of wisdom to sell your exempts now, and buy the industrials before that change takes place. As far as the corporations are concerned, of course they do want the capital stock tax repealed, and if it is repealed, they will add to the income tax.

I want to give you this idea of taxation: The government must have money and it should raise its money in some sure way. The government's income is on a foundation of sand, and the government should not depend on its entire revenue on such a thing as income. You can never have an equality of taxes unless you have a complication of taxes, for no two companies or individuals are in the same position. In order to have them pay the same amount for the support of the government, it is necessary to tax them in some particular and peculiar way, and perhaps entirely different from any other person in the United States.

So if you want to have equality in taxation, you must have complication in taxes, and it is necessary to have stamp taxes, capital taxes, income taxes, etc., so that the other fellow is taxed, too. Otherwise, you are going to always find some one who is escaping taxes altogether.

The sales tax has been the thing most companies would like to have, and, of course, it is the most difficult. Perhaps under the sales tax more people would escape than under the income tax.

Now I think I had better tell you that you can ask me questions for about two minutes, because I don't know many answers.

Q. I would like to ask, regarding form T.P., is it necessary that the pulp wood operator execute that form?

A. I have a hard case up at present, a manufacturer of roofing, and he doesn't use anything that a paper manufacturer uses. His roofing has a felt base, and he owns no timberland of any kind, and I doubt if he uses any pulp at all in the base of his product. We have written to the Treasury Department time and time again, asking that he be relieved of making out that form, but we always get a letter back, requesting that the form be filled out.

If you don't fill them, you are just arousing the antagonism of the income tax unit, and they will get some very good guesses against you, and there you are. We have had to decide the matter of filing, not on a taxpayer's rights, but what was the political thing to do. That is the answer to your question.

Q. I might ask if we should put federal taxes into the cost?

A. I don't know if you can, but it is up to your accountant. The Tax Appeal Board in its very recent decision, said that taxes should *not* be a deduction or reduction of your invested capital at the beginning of the year, stating that the taxes are accruing all the year the same as any other expense, see? Not, however, for the year in which the income is made, but for the year following.

Q. Say, for instance if you pay $100,000 taxes in 1924, could you put that in as an expense for 1925, and then you could put it into costs for 1925?

Q. Some people did and took it out again.

A. They take it out when you figure the tax, yes.

Q. It really is an expense of doing business.

A. But you have to take that tax out.

Q. You would for that year, but in the 1925 cost I don't think you have to take it out again, according to that decision, do you?

A. No.

Q. It doesn't mean that you have to take a deduction.

Q. According to that late decision you can.

A. So far as taxes are concerned, as a legal proposition, they are not a liability until they accrue against you. Perhaps you have to take that into due consideration. A tax is due and payable, we will say, on the first day of December, and you know full well, perhaps in June, that it is going to be so and so, but nevertheless, it is not a liability until it is due and accrued. It depends entirely on the wording of the law.

The federal income taxes for 1924 are payable in 1925 and not a cent of it is due in 1924. It doesn't make any difference, for there isn't a speck of liability on a company during that year. It doesn't start until March 15, 1925, and it is payable all during the year, so it is an expense for the year 1925, having nothing to do with the year 1924. It is a legal proposition.

Q. In figuring your profit for 1925, can you figure that tax as part of the expense for the year 1925?

A. No.

(To be continued)

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H. Reeve Angel & Co., Inc., Antonia, Bordeaux, 18 cs.
H. Reeve Angel & Co., Inc., Antonia, Bordeaux, 37 bls.
H. Reeve Angel & Co., Inc., American Farmer, London, 4 cs.
Zinkeisen & Co., Thuringia, Hamburg, 6 bls.

CREPE PAPER

L. Greenberg & Son, Thuringia, Hamburg, 6 cs.
S. Hanfling & Co., Thuringia, Hamburg, 100 bls.

SURFACE COATED PAPER

Phoenix Shipping Co., Thuringia, Hamburg, 8 cs.

GOLD COATED PAPER

C. B. Richard & Co., Muenchen, Bremen, 6 cs.

ENVELOPES

Japen Paper Co., American Farmer, London, 2 cs.

TRANSFER PAPER

F. L. Kramer & Co., Muenchen, Bremen, 17 cs.

PARCHMENT PAPER

E. Dietzgen & Co., West Eldara, Antwerp, 2 cs.

BASIC PAPER

Defender Photo-Supply Co., West Eldara, Antwerp, 10 cs.

FANCY PAPER

Whiting & Patterson Co., Inc., Aquitania, Southampton, 6 cs.

MISCELLANEOUS PAPER

J. H. Whitewell, Kentucky, Havre, 1 cs.
A. C. Dodman, Jr., Inc., Rochambeau, Havre, 4 cs.
Japan Paper Co., Rochambeau, Havre, 8 cs.
C. H. Boulin, Rochambeau, Havre, 34 cs.
H. de Maguinn, Rochambeau, Havre, 4 cs.
Guibout freres, Rochambeau, Havre, 3 cs.
Kupfer Bros. & Co., Jufuku Maru, Hamburg, 351 rolls.
Hensel, Bruckman & Lorbacher, Jufuku Maru, Hamburg, 21 cs.
Gilbert Paper Co., Drottningholm, Gothenburg, 64 rolls.
Gilbert Paper Co., Drottningholm, Gothenburg, 100 bls.
Maurice O'Meara Co., Drottningholm, Gothenburg, 239 bls.
The Borregaard Co., Inc., Drottningholm, Gothenburg, 47 bls.
L. Bamberger & Co., Drottningholm, Gothenburg, 138 bls.
Universal Paper Co., Drottningholm, Gothenburg, 289 rolls.
Universal Paper Co., Drottningholm, Gothenburg, 49 bls.
J. P. Heffernan Paper Co., Drottningholm, Gothenburg, 214 bls.
C. K. MacAlpine & Co., Drottningholm, Gothenburg, 27 bls.
C. K. MacAlpine & Co., Drottningholm, Gothenburg, 511 rolls.
Wilkinson Bros. & Co., Inc., Drottningholm, Gothenburg, 249 rolls.
Wilkinson Bros. & Co., Inc., Drottningholm, Gothenburg, 18 bls.
E. H. Sergeant & Co., Drottningholm, Gothenburg, 8 cs.
Perkins, Goodwin & Co., Thuringia, Hamburg, 80 rolls.
Japan Paper Co., Colombo, Genoa, 15 cs.
Coenca, Morrison & Co., De Grasse, Havre, 2 cs.
Judson Freight Forwarding Co., De Grasse, Havre, 17 cs.
P. Puttman, De Grasse, Havre, 35 cs.

RAGS, BAGGINGS, ETC.

The Stone Bros. Co., Inc., Kentucky, Havre, 258 bls. rags.
Central National Bank, Kentucky, Havre, 17 bls. rags.
Brown Bros. & Co., Kentucky, Havre, 168 bls. rags.
Anglo-South American Trust Co., Kentucky, Havre, 89 bls. rags.
The Stone Bros. Co., Inc., Menapier, Antwerp, 332 bls. rags.
Baltimore Trust Co., Menapier, Antwerp, 55 bls. rags.
A. W. Fenton, Inc., Menapier, Antwerp, 212 bls. rags.
Atlas Waste Manfg. Co., McKeesport, Dunkirk, 51 bls. rags.
R. Bishop Manfg. Co., McKeesport, Dunkirk, 78 bls. rags.
The Barret Co., McKeesport, Dunkirk, 113 bls. rags.
Castle & Overton, Inc., McKeesport, Dunkirk, 187 bls. bagging.
Castle & Overton, Inc., McKeesport, Dunkirk, 32 bls. rags.
Royal Manfg. Co., McKeesport, Dunkirk, 81 bls. thread waste.
Katzenstein & Keene, Inc., McKeesport, Havre, 19 bls. rags.
V. Galaup, McKeesport, Havre, 184 bls. rags.
E. J. Keller Co., Inc., Rochambeau, Havre, 81 bls. rags.
National City Bank, Rochambeau, Havre, 40 bls. rags.
Equitable Trust Co., Rochambeau, Havre, 25 bls. new cuttings.
Castle & Overton, Inc., Rochambeau, Havre, 31 bls. rags.
J. Cohen Son & Co., Nubian, Manchester, 25 bls. rags.
Garfield National Bank, Nubian, Manchester, 118 bls. rags.
Brown Bros. & Co., Nubian, Manchester, 83 bls. rags.
R. F. Downing & Co., Nubian, Manchester, 82 bls. rags.
Baltimore Trust Co., Fenchurch, Marseilles, 26 bls. rags.
The Stone Bros. Co., Inc., Fenchurch, Marseilles, 37 bls. rags.
Castle & Overton, Inc., Fenchurch, Marseilles, 282 bls. bagging.
A. W. Fenton, Inc., Jufuku Maru, Hamburg, 433 bls. rags.
G. M. Graves Co., Jufuku Maru, Hamburg, 34 bls. rags.
The Stone Bros. Co., Inc., Alaunia, Liverpool, 4 bls. rags.
B. D. Kaplan, Alaunia, Liverpool, 8 bls. rags.
Brown Bros. & Co., Antonia, London, 58 bls. rags.
Guaranty Trust Co., American Farmer, London, 33 bls. rags.
Jaffe Products Co., Orizaba, Havana, 7 bls. rags.
Equitable Trust Co., Thuringia, Hamburg, 53 bls. rags.
Brown Bros. & Co., Thuringia, Hamburg, 113 bls. rags.
Brown Bros. & Co., Thuringia, Hamburg, 90 bls. bagging.
A. W. Fenton, Inc., Thuringia, Hamburg, 105 bls. rags.
Union National Bank, Thuringia, Hamburg, 71 bls. bagging.
State Bank, Thuringia, Hamburg, 92 bls. rags.
Equitable Trust Co., Caucasier, Antwerp, 1351 bls. rags.
E. J. Keller Co., Inc., Caucasier, Antwerp, 52 bls. rags.
The Stone Bros. Co., Inc., Caucasier, Antwerp, 22 bls. rags.
The Stone Bros. Co., Inc., Caucasier, Antwerp, 52 bls. bagging.
Mechanics & Metals National Bank, Muenchen, Bremen, 108 bls. rags.
Anglo-South American Trust Co., Muenchen, Bremen, 88 bls. jute card waste.
National City Bank, England Maru, Genoa, 227 bls. rags.
A. W. Fenton, Inc., England Maru, Genoa, 93 bls. rags.
Anglo-South American Trust Co., England Maru, Genoa, 125 bls. rags.
Brown Bros. & Co., Kolsnaren, Helsingfors, 337 bls. rags.
C. R. Spence, West Eldara, Antwerp, 151 bls. rags.
Brown Bros. & Co., West Eldara, Antwerp, 36 bls. rags.
Castle & Overton, Inc., West Eldara, Antwerp, 101 bls. bagging.
Anglo-South American Trust Co., Arabic, Hamburg, 27 bls. rags.

(Continued on Page 72)

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We make them for the largest and fastest machines

Cylinder Wires All Sizes

The Lindsay Wire Weaving Co.

Collinwood Sta. CLEVELAND, OHIO

Imports of Paper and Paper Stock

(*Continued from page 70*)

Bank of New York, Arabic, Hamburg, 107 bls. rags.
Brown Bros. & Co., Coer d'Alene, Alexandria, 51 bls. rags.
National Bank of Commerce, Coer d'Alene, Alexandria, 183 bls. rags.
Salomon Bros. & Co., Coer d'Alene, Alexandria, 125 bls. rags.
Chemical National Bank, Pr. Harding, Bremen, 44 bls. rags.

OLD ROPE

Brown Bros. & Co., Menapier, Antwerp, 99 coils.
Brown Bros. & Co., Kolsnaren, Helsingfors, 9 coils.
S. Birkenstein & Sons, Jufuku Maru, Hamburg, 47 coils.

MANILA ROPE

Ellermans' Wilson Line, Antonia, Southampton, 29 coils.

WOOD PULP

Johanson, Wales & Sparre, Inc., St. Anthony, Sundsval, 1925 bls. sulphite, 390 tons.
Scandinavian Pulp Agency, Inc., St. Anthony, Sundsval, 500 bls. sulphate, 100 tons.
Castle & Overton, Inc., Jufuku Maru, Hamburg, 1380 bls. wood pulp, 267 tons.
W. Hartman & Co., Inc., Jufuku Maru, Hamburg, 300 bls. wood pulp, 40 tons.
Tidewater Papermills Co., Bornholm, Liverpool, N. S., 12,075 bls. wood pulp.
I. Anderson & Co., Bergensfjord, Sarpsborg, 1300 bls. sulphite.
E. M. Sergeant & Co., Bergensfjord, Oslo, 525 bls. chemical pulp.
Central Union Trust Co., Bergensfjord, Oslo, 200 bls. sulphite.
Chemical National Bank, Bergensfjord, Oslo, 600 bls. sulphite.
Scandinavian Pulp Agency, Inc., Drottningholm, Gothenburg, 508 bls. kraft pulp.
Johanson, Wales & Sparre, Inc., Drottningholm, Gothenburg, 299 bls. dry soda pulp.
Johanson, Wales & Sparre, Inc., Drottningholm, Gothenburg, 528 bls. sulphite.
E. M. Sergeant & Co., Drottningholm, Gothenburg, 299 bls. dry soda pulp.
Brown Bros. & Co., Drottningholm, Gothenburg, 250 bls. sulphate.
Castle & Overton, Inc., Thuringia, Hamburg, 500 bls. wood pulp, 100 tons.
Castle & Overton, Inc., Arabic, Hamburg, 280 bls. wood pulp.
Buck, Kiaer & Co., Muenchen, Hommelvik, 300 bls. sulphite, 50 tons.
Acer & Co., Vinemoor, Vancouver, B. C., 6286 bls. sulphite, 898 tons.

STRAW PULP

J. Anderson & Co., Arabic, Hamburg, 110 bls.

WOOD PULP BOARDS

Lowy & Lowy, Drottningholm, Gothenburg, 7 bls.
Lagerloef Trading Co., Muenchen, Bremen, 339 bls.
Lagerloef Trading Co., Kolsnaren, Kotka, 164 bls.

WOOD FLOUR

B. L. Soberski, Bergensfjord, Fredrikstad, 1050 bags.
The Burnet Co., Drottningholm, Gothenburg, 235 bags.

PHILADELPHIA IMPORTS

WEEK ENDING NOVEMBER 28, 1925

O. G. Hempstead & Co., Kentucky, Havre, 7 cs. paper.
E. J. Keller Co., Inc., McKeesport, Dunkirk, 102 bls. rags.
S. Birkenstein & Sons, McKeesport, Dunkirk, 480 bls. rags.
Castle & Overton, Inc., McKeesport, Dunkirk, 403 bls. rags.
Atterbury & McKelvey, McKeesport, Havre, 146 bls. rags.
D. I. Murphy, Jufuku Maru, Hamburg, 112 bls. rags.
Philadelphia National Bank, Jufuku Maru, Hamburg, 52 bls. rags.
G. M. Graves Co., Jufuku Maru, Hamburg, 98 bls. rags.
S. Birkenstein & Sons, Jufuku Maru, Hamburg, 12 bls. old rope.
Bulkley, Dunton & Co., Jufuku Maru, Hamburg, 260 bls. wood pulp, 52 tons.
D. M. Hicks, London Exchange, London, 116 bls. waste paper.
Equitable Trust Co., London Exchange, London, 56 bls. waste paper.
New York Trust Co., London Exchange, London, 185 coils old rope.
Old Colony Trust Co., London Exchange, London, 184 coils old rope.
E. J. Keller Co., Inc., Hektor, Marseilles, 110 bls. rags.
E. J. Keller Co., Inc., Hektor, Barcelona, 296 bls. rags.
E. J. Keller Co., Inc., Boschdyk, Rotterdam, 56 bls. rags.
E. J. Keller Co., Inc., Legie, Hamburg, 52 bls. rags.

BALTIMORE IMPORTS

WEEK ENDING NOVEMBER 28, 1925

E. J. Keller Co., Inc., Boschdyk, Mannheim, 510 bls. wood pulp.
Castle & Overton, Inc., West Haven, Rotterdam, 1000 bls. wood pulp.
Bulkley, Dunton & Co., Westerner, ———, 1025 bls. wood pulp.
Bulkley, Dunton & Co., Westpool, ———, 2000 bls. wood pulp.
Castle & Overton, Inc., Jufuku Maru, Hamburg, 500 bls. wood pulp, 100 tons.
M. Gottesman & Co., Inc., Jufuku Maru, Hamburg, 2100 bls. wood pulp, 325 tons.
National Bank of Commerce, Jufuku Maru, Hamburg, 36 bls. rags.
Baltimore Trust Co., Kentucky, Havre, 83 bls. rags.

BOSTON IMPORTS

WEEK ENDING NOVEMBER 28, 1925

Brown Bros. & Co., Kentucky, Havre, 17 bls. new cuttings.
V. Galaup, Kentucky, Havre, 97 bls. rags.
The Stone Bros. Co., Inc., Kentucky, Havre, 165 bls. bagging.
E. J. Keller Co., Inc., Lorain, Hamburg, 402 bls. rags.
Bulkley, Dunton & Co., Nordvard, ———, 2500 bls. wood pulp.
Castle & Overton, Inc., West Haven, Rotterdam, 186 bls. wood pulp.
Castle & Overton, Inc., ———, Germany, 910 bls. wood pulp.

GALVESTON IMPORTS

WEEK ENDING NOVEMBER 28, 1925

E. J. Keller Co., Inc., Endicott, Amsterdam, 76 bls. rags.

NEWPORT NEWS IMPORTS

WEEK ENDING NOVEMBER 28, 1925

Johanson, Wales & Sparre, Inc., St. Anthony, Sundsval, 500 bls. sulphite pulp, 100 tons.
M. Gottesman & Co., Inc., St. Anthony, Sundsval, 1000 bls. sulphite pulp, 200 tons.
Scandinavian Pulp Agency, Inc., St. Anthony, Sundsval, 1875 bls. sulphite pulp, 375 tons.

NORFOLK IMPORTS

WEEK ENDING NOVEMBER 28, 1925

Parsons & Whittemore, Inc., St. Anthony, Kotka, 395 rolls news print.
Castle & Overton, Inc., West Haven, Rotterdam, 280 bls. wood pulp.

Brotherhood Opens Canadian Branch

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., December 1, 1925.—The International Brotherhood of Papermakers has opened a Canadian branch in Three Rivers, Quebec, with Frank P. Barry, of Balston Spa, first vice president of the union, in charge, it was announced at union headquarters here. The Canadian branch is being operated in conjunction with the International Brotherhood of Pulp and Sulphite Workers, which is meeting a portion of the expense of maintaining the branch. The Pulp and Sulphite Workers' Union is being represented at the Canadian branch by M. R. Roberts, an Oxford College graduate. The branch offices of the Carpenters' and Machinists' Unions located in Montreal are co-operating with the Papermakers and Pulp and Sulphite Workers' branch office in the distribution of literature and other matter.

The decision to establish a Canadian branch was arrived at after considerable discussion between the various paper mill unions. It was stated here that papermaking plants in Canada, particularly in the Province of Quebec, have recently been in receipt of a large number of orders with the result that the unorganized mills are running seven days a week and in consequence the mills that are organized from a union standpoint are placed at a disadvantage in a competitive way. The Canadian mills working under union agreements have complained to the heads of the various paper mill unions of this condition, it is said. The unions are making every effort to organize the men employed in the non-union mills as the first step towards placing all the mills in the province on an equal footing through a six day week.

Bank Takes Over Cole Paper Mill

HOLYOKE, Mass., December 1, 1925.—The W. A. Cole paper mill at Putney has been taken over by the Vermont People's National Bank of Brattleboro, under a mortgage of between $40,000 and $50,000. C. A. Poland, a former superintendent, has been placed in charge of the mill, supplanting H. C. Warnock, of this city.

The bank does not intend to foreclose the mortgage, but will make an effort to keep the mill in operation. Mr. Poland was superintendent of the mill for a long time until the advent of Mr. Warnock a few months ago. There are twenty-three persons on the payroll of the company.

E. L. Walker and H. D. Kelley, of Bellows Falls, are trustees of the estate of the late William A. Cole, who was a grandfather of Mrs. Warnick.

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FOR PAPER MILLS

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Bleached Sulphite

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"FORSHAGA"
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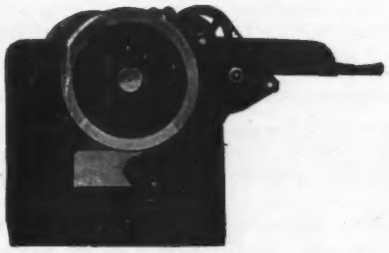

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R. J. Marx, 133-139 Finsbury Pavement, London, E. C.

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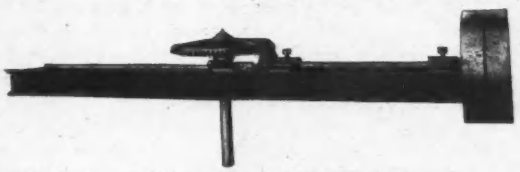

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New York Market Review

Office of THE PAPER TRADE JOURNAL,
Wednesday, December 2, 1925.

The nation's consumption of news print, which has gone into record figures during the last several months, neared its peak mark last week with the result that the local paper industry has been stimulated to a high degree of activity. Publishers from all over the country are taxing the leading paper plants to a capacity production. Advertising is reported to be better than it has been for years. Indications point to an even larger consumption of news print before and for some little time after the New Year.

Buyers of many commodities are said to have disposed of most of their stocks and manufacturers as a result are looking forward to an increasing quantity of contract business in the near future.

In the meanwhile these manufacturers are receiving inquiries about terms. Spot business continues at a brisk pace. There is still a good demand for kraft paper and manila.

Mechanical Pulp

A large amount of contract business is being done in the ground wood market, and reports still indicate that an increase in business may be expected in the near future. Spot trading continues fair. There is reason to believe that buyers are nearing the end of their supplies of this commodity and that more orders will be forthcoming. Buyer and manufacturer alike are finding difficulty in obtaining and producing a sufficient quantity of mechanical pulp. This scarcity is expected to continue for some time.

Chemical Pulp

Manufacturers here are still being pressed into rapid production of kraft pulp, inasmuch as there is no relief in sight for business in Sweden. With the majority of kraft pulp and sulphite sold out abroad for 1926, shipments of these materials to America are few. The demand for chemical pulp continues to keep the domestic manufacturers busy.

Old Rope and Bagging

Offerings in the market for foreign and domestic bagging continued scarce last week, though as a result of a good demand for this material, the tone of the market seemed as strong as usual for the time of year. Prices, it is still believed, will rise if the scarcity continues to prevail. The price of old rope remains stable in the face of a steady good demand.

Rags

Prices for rags manufactured in America are still cheaper than those for rags manufactured abroad. There is a good demand for this product from consumers in all countries. The consumption in both lands is still heavy.

Waste Paper

No material alterations in the prices of waste papers was evidenced last week, though the preference of some buyers for the better grades was quite manifest, as it has been for the last month or so. It is not believed that this preference is likely to effect the market to any considerable extent. The easing off of the lower and coarser grades continued to be slight. In the meanwhile prices on all grades are being well maintained.

Twine

Manufacturers of twine are still being kept busy by the holiday season. The outlook in the twine market is rosy, irrespective of the seasonal demand that has stimulated it recently more than usual.

Standard Paper Employees Meet

RICHMOND, Va., December 1, 1925.—A meeting that will long be remembered by the employees of the Standard Paper Manufacturing Company of Richmond was held in the plant on November 12. This meeting was sponsored by the safety committee of the company and was one of the largest and most enthusiastic meetings that the employees of the Standard have ever had.

More than 250 members of the company with their wives and sweethearts attended the meeting which began with a movie emphasizing the importance of all safety measures in industrial plants. Around the safety picture was woven a beautiful romance. The picture was very educational and showed in detail the prone pressure method of resuscitation. This is the latest method and is used almost universally in all cases requiring resuscitation.

Following the picture, Robert S. Crump, president of the Standard, in very appropriate words, presented Walter Crenshaw, an employee, a gold medal from the Liberty Mutual Insurance Company. This medal was given to Mr. Crenshaw for his meritorious service in saving, through safety measures, the life of a young Richmond boy who had been almost killed by a live wire. Mr. Crenshaw used the prone pressure method of resuscitation taught him in the Standard's Safety Organization.

Features of the program were two colored quartets which entertained with popular Southern spirituals and melodies. A contest between the quartets took place and the one from plant three barely won over the quartet from mill one. Number two was also going to have a try for the prize, but unfortunately its star baritone singer, who possesses one of the sweetest voices in the South, was indisposed, so plant two was "out of it."

Those present joined in the singing of favorite community songs, led by Ralph Angell, of mill number two. Harry Deffew, of mill three, entertained with impersonations of Sir Harry Lauder. He did credit to the famous Scotch tenor.

Rev. R. Cary Montague made a splendid appeal for the Community Fund Chest drive that was on for the benefit of local charities.

Refreshments were served and the evening closed with everybody happy and ready for more such gatherings.

M. C. Tuttle Co. To Build Jessup and Moore Addition

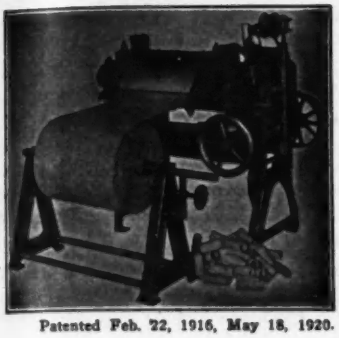
BOSTON, Mass., December 2, 1925.—The Jessup & Moore Paper Company, of Philadelphia, Pa., has placed a contract with the Morton C. Tuttle Company, 862 Park Square Building, Boston, for the construction of a machine room extension, 39 feet by 361 feet, of concrete, brick and steel, at the company's Augustine Mills, Wilmington, Del. Construction will start at once.

Dietz Toilet Paper Machinery

AND LATEST IMPROVED PATENTED

Automatic Tube Machines

For Making Tubes for Toilet Paper Rolls, Paper Towel Rolls



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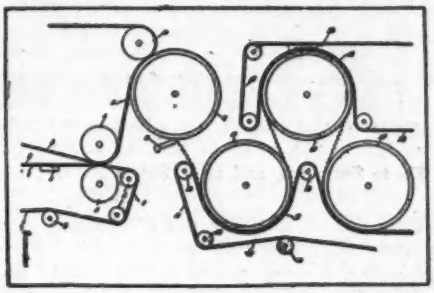
In the manufacture of CREPED PAPER Napkins, Toweling or Stretchable Bag Papers and Creped Packing or Creped Wrapping Papers

The Best Known to the Art

No Breaks from Week-End to Week-End



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FOURDRINIER WIRES

WM. CABBLE EXCELSIOR WIRE MFG. CO.

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Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, December 2, 1925

With current contract shipments holding firm the situation in the chemical market continued along favorable lines last week. Manufacturers report that a satisfactory amount of spot business was transacted, and that an increase of trade may be expected in the near future. Interest in contracts for the coming year is said to be keener considering the season than it has been for some time. Higher prices are expected, it is said.

BLANC FIXE.—Buyers of blanc fixe are reported to be nearing the end of their supplies, and manufacturers, it is said, are receiving an increasing number of contract orders for 1926. At the same time the demand for spot business is understood to be picking up. In view of this situation there was little or no shading of prices last week. Pulp is still selling at $60 to $70 a ton and at from $55 to $60 a ton in bulk, at works. Powder is quoted at $75 to $90 a ton, and from $80 to $85 in less than car load lots.

BLEACHING POWDER.—The sale of bleaching powder last week was well maintained both in spot and contract trade, although, according to some reports, current business has shown a tendency to slacken. This trend, it was explained, is considered to be seasonal. The tone of the market was as firm and as steady as formerly. Prices are quoted at from $2.00 to $2.40 per hundred pounds in large drums at works.

CAUSTIC SODA.—Manufacturers of caustic soda have been moving supplies in record volume to consumers in all parts of the country, it was reported last week. Conditions are said to be extremely good. Compared with the business transacted last fall, this year's volume is said to be much higher than it was then. Prices prevailed at from $3.10 to $3.15 per hundred pounds, at works. For less than car load lots, prices were quoted at from $3.76 to $3.91 per hundred pounds.

CASEIN.—A moderate amount of business continued to be transacted in the casein market last week, conditions in general remaining the same. Prices tend to be lower. Domestic casein sells at 12 cents a pound. Foreign grades bring from 13.50 to 14.75 cents a pound.

CHINA CLAY.—The steady good demand for china clay continued with no let up last week. Buyers were still reported to be turning to England for their supplies, as the freight situation in the south is little changed, it is said. When the embargo reported to exist in Florida will be lifted is not known. Foreign grades still sell at from $14.50 to $22.50 a ton; domestic at $12 to $15 for the same quantity.

CHLORINE.—Forward interest in the chlorine market is reported to be especially good at the present writing and prices rule firm. There has been no abatement in the popularity of this product in chemical circles. Spot business is reported to be moving along at good speed. Manufacturers are accepting orders at 4 cents a pound in tanks or multi-unit cars, at works. Spot prices are still quoted at 4½ cents a pound.

ROSIN.—The bulk of the demand for rosin continues to be for the lower grades. The market in general continued firm last week. Interesting figures on the amount of this product consumed during the year of 1922 and 1923 were recently announced by the bureau of Chemistry of the United States Department of Agriculture and published in the "Naval Stores Review" as follows: for 1922, 754,927 barrels of 500 pounds each; for 1923, 902,010 barrels of 500 pounds each. Paper maker grades still command from $15.55 to $15.60, ship side, in barrels of 280 pounds.

SALT CAKE.—The general tone of the salt cake market remains firm and prices are still well maintained. Spot business last week was reported to have improved. The usual volume of contract business was transacted, there being no change in the prices which are quoted at from $17 to $20 a ton in bulk at works.

SODA ASH.—Though shipments of soda ash are reported to have fallen off last week to a small extent, the average for this month, it is said, will compare more than favorably with that for the month preceding. Leading producers reported a steady movement of light and dense ash on contract. Prices still evidence a firm tendency. They are 1.26 to 1.63 cents a pound in bulk at works.

STARCH.—Buyers from all over the country continued to keep the manufacturers of starch busy last week, there being no lessening of the unusual demand for both contract shipments and immediate trading. Special paper starch continued to be quoted at $3.32 per hundred pounds in bags and barrels.

SULPHATE OF ALUMINA.—Prices are firm in the sulphate of alumina market. Paper manufacturers are still placing orders for this product in large quantities, and contract withdrawals are reported in increasing numbers. Prices are still quoted at from $1.40 to $1.50 per 100 pounds for commercial grades. The iron free is bringing anywhere from $2.00 to $2.30 for the same quantity.

SULPHUR.—No interruption is reported in the firm trend of the sulphur market. Prices still hold at from $15 to $16 a ton at mine and at from $19 to $30 a ton in bulk ship side.

TALC.—The tone of the talc market is still good. Manufacturers report no changes in prices. The quotation is, according to grade, from $17 to $18 a ton.

CONSTRUCTION NEWS

(*Continued from page 44*)

New York, N. Y.—The Paper Box Manufacturers' Supply and Machinery Company has been incorporated with a capital of $20,000, to manufacture and deal in paper box equipment, paper stocks, etc. The incorporators are S. J. and J. Tomchin, and I. Sack. The company is represented by Oscar Bellick, 154 Nassau street.

Mill Operations

Dallas, Tex.—The Oak Cliff Paper Mills, Inc., is operating at maximum capacity at its plant in the Oak Cliff district, and will continue on this schedule indefinitely. The plant has a rated output of about 80,000 lbs. of paper products per day, including box board specialties, building and wrapping papers, etc. E. T. Fleming, Sr., is general manager, and J. B. Fleming, secretary and treasurer.

Plans For New Oregon Mill Approved

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., November 27, 1925.—W. P. Hawley, president of the St. Helen's Pulp and Paper Company, of St. Helen's, Ore., who has returned from his recent trip to Europe, met the directors and stockholders of the new company in Portland recently, when approval was given to the plans for the new $1,000,000 plant, to be started at once. E. O. Oberdorfer arrived from Michigan, November 25, to take charge of the work of supervision.

The new plant will be located on the line of the St. Helen's Dock and Terminal Company as well as on the Columbia River, thus having good water and rail facilities. It is expected that the mill will be operating in about nine months.

Japanese Paper and Pulp Stocks

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., December 2, 1925.—Stocks of paper and pulp in Japanese warehouses at the end of August reached a total value of $8,573,110, according to a report from M. Katsumata, office of the Commercial Attache, Tokyo. The largest items were foreign style papers valued at $6,756,194, and pulp valued at $1,249,619.

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HAND PICKED
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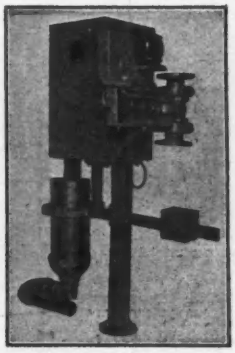

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Full information on request.

TRIMBEY MACHINE WORKS
Glens Falls, N. Y.

"Made in Canada"? Yes.

Market Quotations

Quoted by Hepburn & Co., No. 74 Broadway, N. Y. City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS	BID	OFFERED
Abitibi Poyer and Paper, Gen. 6s 1940	100	102
Advance Bag and Paper, 7s 1943	98	100*
Brompton Pulp and Paper, 6s 1927	94	96
Beaver Board, 8s 1933	92	94
Bedford Pulp and Paper, 6½s 1942	98	...
Berkshire Hills Paper Co., 8s 1941	...	80
Beaver Products Corp., 7½s 1942	104	106
Belgo Canadian Paper, 6s 1943	100	102
Brown Paper Co., 8s 1931	102	...
Berlin Mills, 5s 1931	98	...
Bryant Paper Co., 6s 1942	99	102*
Brown Company Serial, 6s 1925-43	97	100
Central Paper 6½s 1925-42	91	94
Cape Breton Pulp and Paper, 6s 1932	100	...
Carthage Sulphite Pulp and Paper, 8s 1941	40	50
Champion Coated Paper Co., 6s 1924-34	...	103
Champion Fibre Co. Notes, 8s 1930	101	...
Cherry River Paper, 5s 1929	98	100*
Donnaconna Paper Co., Ltd., 6s 1940	98	101
Eddy Paper, 7½s 1931	100	...
Eagle Paper, 6½s 1932	96	100
Escanaba Paper, 6s 1933	87	95*
Fox River Paper, 7s 1931	100	...
Fort Orange Paper Co., 7s 1942	95	99
Gilbert Paper Co., 7s 1927	96	...
Gilbert Paper Co., 6½s 1923-29	101	102*
Hammermill Paper Co., 6s 1930-39	99	...
Hummell, Ross Fibre Corp., 7s 1925	90	...
Jessup & Moore Paper Co., 6s 1945	98½	100
Lake Superior Pulp and Paper, 6s 1941	105	...
Mattagami Pulp and Paper, 6s 1937	90	...
Marinette & Menominee, 7½s 1936	104	...
National Paper and Type, 6s 1947	96	99*
Oswego Falls Corp., 6s 1942	102	105
Orono Pulp and Paper, 5s 1941	93	96*
Orono Pulp and Paper, 6s 1943	97	100*
Oxford Paper Co., 6s 1947	101	...
Paterson Parchment Paper, 5½s 1927-28	98	100
Paterson Parchment, 6s 1938	98	100*
Parker Young Co., 6½s 1944	92	96
Price Bros. & Co., Ltd., 6s 1943	100	...
Provincial Paper Mills, Ltd., 6s 1940	97	...
Riordon Co., Series A, 8s 1940	115	118
Riordan Paper, 6s 1924	99	101
Riordan Pulp and Paper, Ltd., 6s, 1929	33	35
River Raisin Paper, 8s 1936	104	106
St. Maurice Paper Co., Ltd., 5½s, 1929	98½	99¼
St. Regis Paper, 6½s, 1929-35	97	102
Smith (Howard) Paper Mills, 7s 1941	96	99
Smith (Howard) Paper Mills, 6s 1934	98	...
St. Croix Paper, 5s 1923-37	95	...
Stevens & Thomson Paper, 6s 1942	88	95
Spanish River Pulp and Paper, 6s 1931	105	108
Spanish River Pulp and Paper, Gen 8s 1941	106	109
Ticonderoga Pulp and Paper Co., 6s 1940	91	95
Ticonderoga Pulp & Paper 1-5, 1930	88	93
S. D. Warren Company, 6s, 1945	97	100
Whittaker Paper, 1st 7s 1942	98	...
Watab Paper Co., 6½s 1942	100	104
Waterway Paper Products, 7s 1924-27	95	100
Wayagamack Pulp and Paper, Ltd., 6s 1951	88	90

STOCKS	BID	ASKED
Abitibi Power and Paper, Com	67	70
Abitibi Power and Paper, Pfd	103	...
Advance Bag and Paper, Com	8	12*
Advance Bag and Paper, Pfd	77	...
Beaver Board, Com.	4	6
Beaver Board, Pfd	34	37
Bryant Paper, Cap	12	...
Bryant Paper, Pfd	9	...
Chicago Mill & Lumber Co., Com	63	...
Chicago Mill & Lumber Co., Pfd	98	104
Crown Williamette, Com	93	98*
Crown Williamette, 7% A, Pfd	98	SW
Donnaconna Paper, Com	49	54
Donnaconna Paper, Pfd	95	100
Great Northern Paper, Cap	260	270
Jessup & Moore Paper, Pfd	85	...
International Paper Co., Com	55	60
International Paper Co., Pfd. 6%	75	80
Mengel Company, Com	60	65
Mengel Company, Pfd	83	93
Oxford Papers, Com	102	...
Oxford Paper Co., Pfd	100	...
Provincial Paper Co., Com	94	98
Provincial Paper Co., Pfd	99	...
Price Brothers, Cap	47	50
St. Croix Paper	185	215
St. Maurice Paper Co., Cap	83	85
St. Regis Paper Co., Cap	54	56
Spanish River Pulp and Paper, Com	97	101
Spanish River Pulp and Paper, Pfd	109	...
Ticonderoga Pulp and Paper, Cap	145	...
West Virginia Pulp and Paper, Cap	...	47
West Virginia Pulp and Paper, Pfd	93	105
Whittaker Paper, Com	50	...
Whittaker Paper, Pfd	60	70

* Nominal.

Paper
(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub Sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—		
Rolls, contract	3.50	@ 3.90
Rolls, contract, '26	3.25	@ 3.65
Rolls, transit	3.75	@ 4.25
Sheets	4.00	@ 4.25
Side Runs	3.25	@ 4.00
Book, Cased—		
S. & S. C.	7.00	@ 9.75
M. F.	6.25	@ 8.75
Coated and Enamel	8.00	@15.00
Lithograph	8.00	@15.00
Tissues—Per Ream		
White No. 1	.80	@ 1.00
Anti-Tarnish	1.10	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.75	@ .85
Kraft	.90	@ 1.00
Manila	.75	@ .85
Kraft—		
No. 1 Domestic	6.50	@ 7.00
No. 2 Domestic	5.75	@ 6.20
Southern	5.75	@ 6.25
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
S. Screening	3.00	@ 3.50
Card Middles	4.00	@ 5.00
Boards—per ton—		
News	45.00	@47.50
Straw	57.00	@60.00
Chip	42.00	@45.00
Binders' Boards	72.50	@77.50
Sgl. Mla. T.I. Chip	58.00	@60.00
Wood Pulp	70.00	@75.00
Container	62.50	@67.50
Sulphate Screenings—		
Coarse	.75	@ .85
Refined	1.75	@ 2.00
Ground Wood—		
Screenings	20.00	@25.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs	15.00	@16.00

Mechanical Pulp
(Ex-Dock)

No. 1 Imported—		
Moist	35.00	@40.00
Dry	38.00	@42.00
(F. o. b. Mill)		
No. 1 Domestic	28.00	@32.00

Chemical Pulp
(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	4.00	@ 4.50
Easy Bleaching	3.25	@ 3.60
No. 1 strong unbleached	2.95	@ 3.25
No. 2 strong unbleached	2.80	@ 2.95
No. 1 Kraft	3.00	@ 3.25
Sulphate—		
Bleached	3.75	@ 4.00
(F. o. b. Pulp Mill)		
Sulphite (Domestic)—		
Bleached	4.00	@ 4.75
Easy Bleaching Sulphite	3.00	@ 3.25
News Sulphite	2.75	@ 2.90
Mitscherlich	3.25	@ 3.75
Kraft (Domestic)	3.00	@ 3.25
Soda Bleached	4.00	@ 4.25

Domestic Rags
New Rags
Prices to Mill f. o. b. N. Y.

Shirt Cuttings—		
New White, No. 1	14.50	@15.00
New White, No. 2	8.00	@10.00
Silesias No. 1	9.75	@10.50
New Unbleached	14.00	@14.70
Washables	8.00	@ 8.25
Fancy	9.25	@ 9.75
Blue Overall	11.50	@11.75
New Blue Prints	7.25	@ 7.75
New Soft Blacks	5.75	@ 6.00
Mixed Khaki Cuttings	6.75	@ 7.25
Pink Corset Cuttings	11.25	@11.75
Pink Muslin	10.00	@10.50
New Light Seconds	3.50	@ 3.75
O. D. Khaki Cuttings	7.00	@ 7.50
Men's Corduroy	5.75	@ 6.25
New Mixed Blacks	4.00	@ 4.50

Old Rags

White, No. 1—		
Repacked	6.75	@ 7.25
Miscellaneous	6.25	@ 6.75
White, No. 2—		
Repacked	4.00	@ 4.25
Miscellaneous	3.50	@ 3.75
St. Soiled, White	2.90	@ 3.00
Thirds and Blues—		
Repacked	3.75	@ 4.00
Miscellaneous	3.00	@ 3.25
Black Stockings	3.75	@ 4.25
Roofing Rags—		
Cloth Strippings	2.30	@ 2.40
No. 1	2.30	@ 2.40
No. 2	1.90	@ 2.00
No. 3	1.50	@ 1.60
No. 4	1.60	@ 1.70
No. 5A	1.15	@ 1.25

Foreign Rags

New Light Silesias	10.00	@11.00
Light Flannelettes	10.50	@11.75
Unbleached Cottons	14.00	@14.50
New White Cuttings	14.00	@15.00
New Light Oxfords	10.00	@10.50
New Light Prints	9.00	@ 9.50
New Mixed Cuttings	4.25	@ 4.50
New Dark Cuttings	4.00	@ 4.25
No. 1 White Linens	10.00	@11.00
No. 2 White Linens	7.25	@ 8.25
No. 3 White Linens	6.25	@ 6.75
No. 4 White Linens	4.50	@ 5.50
Old Extra Light Prints	4.25	@ 4.50
Ord. Light Prints	3.25	@ 3.75
Med. Light Prints	2.50	@ 3.00
Dutch Blue Cottons	3.50	@ 4.00
Ger. Blue Cottons	2.75	@ 3.00
Ger. Blue Linens	4.00	@ 4.25
Checks and Blues	3.25	@ 3.50
Linsay Garments	2.20	@ 2.35
Dark Cottons	2.10	@ 2.20
Shoppery	2.00	@ 2.10
French Blues	3.50	@ 4.00

Bagging
Prices to Mill F. o. b. N. Y.

Gunny No. 1—		
Foreign	3.60	@ 4.00
Domestic	3.75	@ 4.00
Wool Tares, light	2.90	@ 3.10
Wool Tares, heavy	3.00	@ 3.25
Bright, Bagging	2.85	@ 3.00
Mixed Bagging	2.40	@ 2.50
Sound Bagging	2.10	@ 2.20
Roofing Bagging	1.75	@ 1.80
Small Mixed Rope	2.25	@ 2.50
Manila Rope—		
Foreign	5.50	@ 5.75
Domestic	6.50	@ 7.00
New Bu. Cut	4.00	@ 4.25
Hessian Jute Threads—		
Foreign	4.50	@ 5.00
Domestic	4.25	@ 4.75

Old Waste Papers
(F. o. b. New York)

Shavings—		
Hard, White, No. 1	3.65	@ 3.85
Hard, White, No. 2	3.15	@ 3.25
Soft, White, No. 1	3.00	@ 3.25
Flat Stock—		
Stitchless	1.35	@ 1.45
Overissue Mag	1.30	@ 1.40
Solid Flat Book	1.20	@ 1.30
Crumpled No. 1	.85	@ .95
Solid Book Ledger	1.75	@ 2.00
Ledger Stock	1.50	@ 1.65
New B. B. Chips	.65	@ .75
Manilas—		
New Env. Cut	2.65	@ 2.80
New Cut No. 1	1.65	@ 2.00
Extra No. 1 old	1.20	@ 1.90
Print	.80	@ .90
Container Board	.65	@ .75
Bogus Wrapper	.75	@ .85
Old Krafts Machine compressed bales	2.45	@ 2.60
News—		
No. 1 White News	2.00	@ 2.10
Strictly Overissue	.75	@ .85
Strictly Folded	.67½	@ .75
No. 1 Mixed Paper	.47½	@.52½
Common Paper	.50	@ .75

Twines

Cotton—(F. o. b. Mill)—		
No. 1	.42	@ .43
No. 2	.41	@ .42
No. 3	.40	@ .42
India, No. 6 basis—		
Light	.19	@ .20
Dark	.17	@ .19
B. C., 18 basis	.39	@ .41
A. B. Italian, 18 Basis	.34	@ .35

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CLOCK ROLLS
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TIRE WRAP, BED WRAP
BACKING PAPER
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founded 1852
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Finished Jute—			
Dark, 18 basis	.30	@	.31
Light, 18 basis	.28	@	.30
Jute Wrapping, 3-6 Ply—			
No. 1	.22	@	.24
No. 2	.20½	@	.22½
Tube Rope—			
4-ply and larger	.16	@	.19
[illegible] Yarn—			
4-ply and larger	.20	@	.28
4-ply	.21	@	.24
3-ply	.22	@	.25
Unfinished Jute—			
Basis	.15½	@	.16½
Paper Makers' Twine Balls	.12	@	.13
Box Twine, 2-3 ply	.15	@	.17
Jute Rope	.30	@	.40
Ameri. Hemp, 6	.30	@	.32
Sisal Hay Rope—			
No. 1 Basis	.16	@	.18
No. 2 Basis	.10	@	.12
Sisal Lath Yarn—			
No. 1	.14	@	.15
No. 2	.11	@	.13
Manila Rope	.20	@	.21

CHICAGO

Paper

F. o. b. Mill

All Rag Bond	35	@	40
No. 1 Rag Bond	25	@	35
No. 2 Rag Bond	14	@	25
Water Marked Sulphite	9	@	12
Sulphite Bond	7	@	10¾
Sulphite Ledger	9	@	12
Superfine Writing	18	@	24
No. 1 Fine Writing	14	@	18
No. 2 Fine Writing	12	@	14
No. 3 Fine Writing	9	@	12
No. 1 M. F. Book	5½	@	7½
No. 1 S. & S. C. Book	6	@	7¾
Coated Book	7½	@	10
Coated Label	7½	@	10
News—Roll, mill	3½	@	4¼
News—Sheets, mill	3¾	@	4½
No. 1 Manila	4½	@	5½
No. 1 Fibre	4½	@	5
No. 2 Manila	4	@	4½
Butchers' Manila	3¾	@	4¼
No. 1 Kraft	6	@	6¼
No. 2 Kraft (Northern Grade)	5¼	@	5¾
Kraft (Southern Grade)	4¾	@	5
Wood Tag Boards	4¼	@	6½
Sulphite Screenings	3	@	3½
Manila Tissue, 24x36 sheet	7¼	@	7½
White Tissue, 20x30 sheet	7¼	@	7½
Boards, per ton—			
(Delivered Central Territory)			
Plain Chip	45.00	@	47.50
Solid News	47.50	@	50.00
Manila Line Chip	57.50	@	60.00
Container Lined—			
(Delivered Central Territory)			
85 Test	—	@	75.00
100 Test	—	@	80.00

Old Papers

F. o. b. Chicago

Shavings—			
No. 1 Hard White	3.50	@	3.60
White Envel. Cuttings	3.15	@	3.25
No. 1 Soft Shav.	2.90	@	3.10
No. 1 Mixed	1.45	@	1.50
No. 2 Mixed	1.15	@	1.20
Ledger and Writings	1.55	@	1.60
Solid Boots	1.25	@	1.35
No. 1 Light Books	1.00	@	1.05
Blanks	2.00	@	2.10
Kraft	2.50	@	2.75
New Kraft Cuts	2.70	@	2.80
Manila Envelope Cuttings	2.40	@	2.50
Ex. No. 1 Manila	2.00	@	2.10
Print Manila	1.05	@	1.10
Folded News (over-issue)	.90	@	.95
Old Newspapers—			
No. 1	.80	@	.85
No. 2	.65	@	.70
Mixed Papers—			
No. 1	.75	@	.80
No. 2	.60	@	.65
Straw Clippings	.75	@	.80
Binders' Clippings	.75	@	.80
Roofing Stocks, f. o. b. Chicago, Net Cash—			
No. 1	.70	@	.75
No. 2	45.00	@	50.00
No. 3	43.00	@	48.00
No. 4	41.00	@	46.00

BOSTON

Paper

Ledgers—			
Sulphite	.08½	@	.18
Rag content	.18	@	.36½
All Rag	.38	@	.50
Bonds—			
Sulphite	.07½	@	.10½
Rag Content	.17	@	.45
All Rag	.36½	@	.51
Writings	.08	@	.20
Superfines	.22	@	.50
News	.04	@	.04½
Book, Super	.08	@	.10
Book, Coated	.09	@	.14
Coated Litho	.09½	@	.15
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.12
Manila, Sul. No. 1	.05	@	.05
Manila, Sul. No. 2	.03¼	@	.04¼
No. 1 Kraft	.05¼	@	.06½
No. 2 Kraft	.05¼	@	.05¾
Common Bogus	.02½	@	.02¾
Straw Board	—	@	50.00
News Board	—	@	47.50
Chip Board	—	@	45.00
Single Manila Pulp lined board	57.50	@	60.00
Single White, patent coated board	75.00	@	82.50
Wood Pulp Board	80.00	@	85.00
Binder Boards	75.00	@	85.00
Tarred Felts—			
Regular	61.00	@	63.00
Slaters	66.00	@	68.00
Best Tarred, 1 Ply, roll	1.50	@	1.60
Best Tarred, 2 Ply, roll	1.70	@	1.80
Best Tarred, 3 Ply, roll	2.00	@	2.10

Old Papers

Shavings—			
No. 1 Hard White	3.75	@	4.00
White Blank News	1.75	@	2.00
Manila Env. Cuttings	2.80	@	3.00
No. 1 Hard White	3.25	@	3.50
No. 1 Soft White	.02¼	@	.03
No. 2 Soft White	.02½	@	.03
No. 1 Mixed	1.60	@	1.75
No. 2 Mixed	1.25	@	1.50
Solid Ledger Stock	2.00	@	1.75
No. 1 Books, Heavy	1.25	@	—
No. 1 Books, Light	—	@	1.25
No. 1 New Manila	2.50	@	2.60
No. 1 Old Manila	1.75	@	2.00
Print Manila	1.05	@	1.20
Old Kraft	2.25	@	2.35
Overissue News	1.00	@	1.10
Old Newspapers	.70	@	.85
No. 1 Mixed Paper	.60	@	.47½
Box Board, Chip	.60	@	.50

Bagging

Price f. o. b. Boston

Gunny No. 1—			
Foreign	—	@	3.37½
Domestic	—	@	3.50
Manila Rope	—	@	5.50
Mixed Rope	2.00	@	—
Scrap burlaps	—	@	2.37½
Wool Tares, heavy	2.50	@	2.75
Mixed Strings	—	@	1.90
New Burlap Cutting	—	@	3.25

Domestic Rags (New)

Price f. o. b. Boston

Shirt Cuttings—			
New White No. 1	.15½	@	.15
Silesias, No. 1	.11	@	—
New Unbleached	.14¼	@	.15
Washable	.07¼	@	.08
Fancy	.10½	@	—
Cottons—According to Grades—Blue—			
Blue overalls	12½	@	—
New Black, soft	.07	@	—
Khaki Cuttings	.07	@	—
Corduroy	.04	@	.05
New Canvas	.12	@	.12¼

Domestic Rags (Old)

Price f. o. b. Boston

White No. 1	10.00	@	—
Repacked	9.50	@	—
Miscellaneous	8.50	@	—
White No. 2—			
Repacked	6.50	@	—
Miscellaneous	5.25	@	—
Thirds and Blues—			
Repacked	5.00	@	—
Miscellaneous	3.50	@	—
Roofing Stock—			
No. 1	2.15	@	—
No. 2	1.90	@	—
No. 3	1.75	@	—
No. 4	1.90	@	—

PHILADELPHIA

Paper

Bonds	.07	@	.40
Ledgers	.11	@	.40
Writings—			
Superfine	.13	@	.18
Extra fine	—	@	.22
Fine	.20	@	.26½
Fine, No. 2	.16	@	.25
Fine, No. 3	.12	@	.20
Book, M. F.	.06¾	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.11	@	.16
Coated Lithograph.	.09	@	.12
Label	.09	@	.12
News	.03¾	@	.04
No. 1 Jute Manila	.09½	@	—
Manila Sul., No. 1	.04½	@	.06
Manila No. 2	.04	@	.04½
No. 2 Kraft	.05¼	@	.05¾
No. 1 Kraft	.06¼	@	.06½
Common Bogus	.02¾	@	—
Straw Board	56.00	@	55.00
News Board	45.00	@	—
Chip Board	47.50	@	—
Wood Pulp Board	4.50	@	5.00
(Carload Lots)			
Binder Boards—			
Per ton	75.00	@	80.00
Carload lots	65.00	@	70.00
Tarred Felts—			
Regular	66.00	@	68.00
Slaters	70.00	@	72.00
Best Tarred, 1-ply (per roll)	1.85	@	1.95
Best Tarred, 2-ply (per roll)	1.55	@	1.70
Best Tarred, 3-ply	2.10	@	2.15
No. 1 Mixed Paper	.65	@	.70

Domestic Rags—New

Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.13½	@	.14
New White, No. 2	.06	@	.08
Silesias, No. 1	.10½	@	.11
New Unbleached	.14	@	.14½
Washable	.07¼	@	.07¾
Fancy	.09½	@	.10
Cottons—according to grades—			
Blue Overall	.11	@	.12
New Blue	.04	@	.04¼
New Black Soft	.06	@	.06½
New Light Seconds	.03½	@	.03¾
Khaki Cuttings	.06½	@	.07
Corduroy	.04	@	.04½
New Canvas	.08¾	@	.09
New Black Mixed	.05	@	.05½

Bagging

F. o. b. Phila.

Gunny, No. 1—			
Foreign	3.00	@	3.25
Domestic	3.00	@	3.25
Manila Rope	4.75	@	6.00
Sisal Rope	2.50	@	—
Mixed Rope	1.00	@	1.25
Scrap Burlaps	2.25	@	2.50
Wool Tares, heavy	2.00	@	2.13
Mixed Strings	1.25	@	—
No. 1, New Lt. Burlap	3.50	@	3.75
New Burlap Cuttings	3.25	@	3.50

Old Papers

F. o. b. Phila.

Shavings—			
No. 1 Hard White	3.50	@	3.60
No. 2 Hard White	3.00	@	3.25
No. 1 Soft White	2.60	@	2.70
No. 2 Soft White	2.00	@	2.20
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	1.00	@	1.10
Solid Ledger Stock	1.75	@	1.90
Writing Paper	1.60	@	1.60
No. 1 Books, heavy	1.30	@	1.40
No. 2 Books, light	1.20	@	1.25
No. 1 New Manila	1.80	@	2.00
No. 1 Old Manila	1.60	@	1.75
Print Manila	1.25	@	1.35
Container Manila	1.00	@	1.10
Old Kraft	2.00	@	2.10
Common Paper	.50	@	.60
Straw Board, Chip	.60	@	.65
Binders Bd., Chip	.60	@	.65
Over issue News	.85	@	1.00
Old Newspaper	.70	@	.75
Old			
White, No. 1—			
Repacked	6.75	@	7.00
Miscellaneous	6.25	@	6.50
White, No. 2—			
Repacked	.05	@	.05¼
Miscellaneous	.04M	@	.05
Thirds and Blues—			
Repacked	3.75	@	4.00
Miscellaneous	2.75	@	3.00
Black Stockings	4.25	@	4.50
Roofing Stock—			
No. 1	2.00	@	2.15
No. 2	1.90	@	2.00
No. 3	1.25	@	1.35
No. 4	1.10	@	1.20
No. 5A	1.10	@	1.15
B	1.05	@	1.10
C	1.00	@	1.05

TORONTO

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.10½	@	.12½
Light tinted	.11	@	.13½
Dark tinted	.12½	@	.15
Ledgers (sulphite)	—	@	.13
Ledgers No. 1	.36	@	—
Ledgers No. 2	.27	@	—
Writing	.09½	@	
Writing S. C.	.10	@	
News f. o. b. Mills—			
Rolls (carloads)	3.50	@	—
Sheets (carloads)	—	@	4.25
Sheets (2 tons or over)	—	@	4.60
Book—			
No. 1 M. F. (carloads)	8.00	@	—
No. 2 M. F. (carloads)	7.50	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.50	@	—
No. 2 S. C. (carloads)	8.00	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and litho	14.50	@	—
No. 2 Coated and litho	13.50	@	—
No. 3 Coated and litho	12.75	@	—
Coated tinted	.15	@	—
Wrapping—			
Rag Brown	4.75	@	—
White Rag	5.25	@	—
"B" Manila	5.50	@	—
No. 1 Manila	6.50	@	—
Fiber	6.50	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.15	@	—

Pulp

(F. o. b. Mill)

Ground wood	30.00	@	32.50
Sulphite easy bleaching	60.00	@	65.00
Sulphite news grade	55.00	@	58.00
Sulphite, bleached	75.00	@	80.00
Sulphate	62.50	@	65.00

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. cut	3.65	@	—
Soft White Book shavings	—	@	3.15
White Blk. News	1.70	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.25	@	—
Light and Crumpled Book Stock	1.10	@	—
Ledgers and Writings	1.40	@	—
Solid Ledgers	1.40	@	—
Manilas—			
New Manila Cut	—	@	1.60
Printed Manilas	1.10	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.90	@	—
Folded News	.90	@	—
No. 1 Mixed Papers	.70	@	—
Domestic Rags—			
Price to mills, f. o. b. Toronto		Per lb.	
No. 1 White shirt cuttings	.14½	@	.14¾
No. 2 White shirt cuttings	.08	@	.08½
Fancy shirt cuttings	.09¾	@	.10
No. 1 Old Whites	—	@	—
Third and blues	—	@	—